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November 22, 2010

Mr. Pierre Martinez
Siting Project Manager
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814

DOCKET	
09-AFC-4	
DATE	NOV 22 2010
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Subject: Oakley Generating Station Project (09-AFC-4),
Supplemental Information Item #5: Revised ECCCHC City/County of
Oakley/Contra Costa County Application Form and Planning Survey Report

Dear Mr. Martinez:

Attached please find three (3) hardcopies and one (1) CD ROM of the Supplemental Information Item #5: Revised City/County of Oakley/Contra Costa County Application Form and Planning Survey Report to Comply with and Receive Permit Coverage under the East Contra Costa County Habitat Conservation Plan and Natural Community Conservation Plan. This document was submitted to the East Contra Costa County Habitat Conservancy for their review on November 22, 2010.

If you have any questions about this matter, please contact me at (916) 286-0278.

Sincerely,

CH2M HILL

A handwritten signature in blue ink, appearing to read "Douglas M. Davy".

Douglas M. Davy, Ph.D.
AFC Project Manager

cc: POS List
Project File



East Contra Costa County
Habitat Conservation Plan
Natural Community
Conservation Plan

City of Brentwood
City of Clayton
City of Oakley
City of Pittsburg
Contra Costa County
ECCC Habitat Conservancy

Template prepared by the
ECCC Habitat Conservancy

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City/County of Oakley/Contra Costa County Application Form and Planning Survey Report to Comply with and Receive Permit Coverage under the East Contra Costa County Habitat Conservation Plan and Natural Community Conservation Plan

Project Applicant Information:

Project Name: Oakley Generating Station

Project Applicant's Company/Organization: Contra Costa Generating Station, LLC

Contact's Name: Greg Lamberg

Contact's Phone: 916-799-9463

Contact's Email: Greg.Lamberg@Radback.com

Mailing Address: Greg Lamberg
Contra Costa Generating Station, LLC
145 Town & Country Drive, Suite 107
Danville, CA 94526

Project Description:

Lead Planner: Krystal Hinojosa, East Contra Costa County Habitat Conservancy
Contra Costa County, Department of Conservation and Development

Project Location: 6000 Bridgehead Road, Oakley, California

Project APN(s) #: The Oakley Generating Station (OGS or project) site has recently been created from the nearly 500-acre property that is owned by the I.E. du Pont de Nemours Company (DuPont). The DuPont property is a one-owner property with multiple Assessor's Parcel Numbers. DuPont has recently obtained a lot line adjustment to create "Parcel A," the 21.95-acre project site, and two separate neighboring parcels. The larger 210-acre parcel from which the OGS parcel will be created is APN #037-020-012.

Number of Parcels/Units: The project parcel is a single parcel of 21.95 acres. The electrical transmission line route is composed of many individual easement parcels that make up a corridor that is 2.4-miles in length with an 80-foot-wide Pacific Gas and Electric Company (PG&E) easement/right-of-way (ROW). The sanitary sewer force main route is also composed of many individual parcels that make up a corridor that is 0.44 miles in length and that will be constructed in Bridgehead Road and Main Street. OGS will also make temporary use of DuPont property for construction laydown and parking and for soil stockpiling.

Size of Parcel(s): The project parcel is a 21.95-acre site located within the boundary of an existing 210-acre site owned by DuPont. The portion of the DuPont site on which the power plant would be constructed is within an area called the "Western Development Area" and is currently used as a vineyard. An existing 1.6-acre conservation area, which includes a 0.62-acre mitigation wetland (Wetland E), is

adjacent to the western property line at Bridgehead Road. The paved construction laydown area is approximately 6.5 acres, the unpaved construction laydown area is approximately 13 acres, the unpaved soil stockpile and access road area is approximately 5.2 acres, and the paved stockpile and access road area is approximately 4.5 acres. The transmission line ROW and pull sites total approximately 25 acres, and the sanitary sewer force main ROW totals approximately 1.5 acres. The detailed area assessments are included in Section I.

Brief Project Description: The OGS (formerly the Contra Costa Generating Station) is a combined-cycle, natural gas-fired power plant owned by Contra Costa Generating Station, LLC. The project will consist of two natural gas-fired combustion turbines with heat recovery steam generators, a steam turbine, air-cooled condenser, and ancillary equipment. Power from the facility will be transmitted 2.4 miles to PG&E's Contra Costa Substation on a new 230-kV single-circuit transmission line. Construction of this line will follow an existing PG&E transmission line ROW and will consist of replacing existing steel-lattice towers with tubular steel poles and reconductoring the line. It will also be necessary to construct a new sanitary sewer force main from the project tie-in location on Bridgehead Road to the gravity main located in Main Street. Construction of this line would be within the Bridgehead Road and Main Street ROWs. The proposed construction worker parking and laydown area for the project will be located east of the proposed project parcel, and soil from the project will be temporarily stockpiled in three areas north of the project parcel.

The project site is located at the intersection of Bridgehead Road and Wilbur Avenue, approximately 3,000 feet south of the San Joaquin River in the City of Oakley, Contra Costa County. The project site is bounded on the west by the PG&E Antioch Terminal, a large natural gas transmission hub; on the north by formerly industrial property belonging to DuPont that has been abandoned; on the east by DuPont's titanium dioxide disposal area; and to the south by a vineyard and the Atchison, Topeka, and Santa Fe railroad.

The City of Oakley is presently revising its zoning regulations to match the 2020 General Plan. Under this general plan, the project parcel is designated for "Utility Energy" land use. The corresponding zoning designation for this land use is also called Utility Energy. The project parcel is currently zoned "specific plan"; however, by the City of Oakley. Because a specific plan has not been proposed for the area and because the project parcel has never been specifically zoned by the City of Oakley, which became a city in 1999, the zoning of "heavy industrial" may also apply as a holdover zoning from the County. The remainder of the DuPont site is classified as "business park" or "light industrial." Surrounding land uses consist of industrial, vacant industrial, commercial, and agricultural uses.

Biologist Information:

Biological/Environmental Firm: CH2M HILL

Lead Contact: Rick Crowe

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Contact's Email: rcrowe@ch2m.com

Mailing Address: Rick Crowe
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Sacramento, CA 95833-2937

East Contra Costa County HCP/NCCP Planning Survey Report for Oakley Generating Station Participating Special Entity

I. Project Overview

Project Proponent: Contra Costa Generating Station, LLC

Project Name: Oakley Generating Station

Application Submittal Date: September 2010 (Partial Updates to June 2010 Version)

Jurisdiction: ☐ Contra Costa County ☒ Participating Special Entity¹
☐ City of Oakley
☐ City of Pittsburg
☐ City of Clayton
☐ City of Brentwood

Check appropriate Development Fee Zone(s): ☒ Zone I ☒ Zone IV
☐ Zone II
☐ Zone III

See Figure 9-1 of the Final HCP/NCCP for a generalized development fee zone map. Detailed development fee zone maps by jurisdiction are available from the jurisdiction or at www.cocohcp.org.

Total Parcel Acreage: 21.95-acre project parcel

Acreage of land to be permanently disturbed²: 16.7 acres (See Table I.1)

Acreage of land to be temporarily disturbed³: 38.4-acres (See Table I.1)

¹ *Participating Special Entities* are organizations not subject to the authority of a local jurisdiction. Such organizations may include school districts, water districts, irrigation districts, transportation agencies, local park districts, geologic hazard abatement districts, or other utilities or special districts that own land or provide public services.

² *Acreage of land permanently disturbed* is broadly defined in the HCP/NCCP to include all areas removed from an undeveloped or habitat-providing state and includes land in the same parcel or project that is not developed, graded, physically altered, or directly affected in any way but is isolated from natural areas by the covered activity. Unless such undeveloped land is dedicated to the Preserve System or is a deed-restricted creek setback, the development fee will apply. The development fees were calculated with the assumption that all undeveloped areas within a parcel (e.g., fragments of undisturbed open space within a residential development) would be charged a fee; the fee per acre would have been higher had this assumption not been made. See Chapter 9 of the HCP/NCCP for details.

³ *Acreage of land temporarily disturbed* is broadly defined in the HCP/NCCP as any impact on vegetation or habitat that does not result in permanent habitat removal (i.e. vegetation can eventually recover).

Table I.1

Summary of Acreages Involved in the Proposed Project by Project Element (Temporary, Permanent, Urban Habitat, and Exempt Acres)

Project Element	Permanent Disturbance (Acres)	Temporary Disturbance (Acres)	Paved/Urban Surfaces (Acres)	Exempt Acreage (Acres)	Total
Project Site	16.69	0.30	2.82	2.12	21.95
Construction Laydown Area	0.0	13.13	6.48	0.70	20.31
Soil Stockpile Area	0.0	5.00	2.22	0.0	7.22
Access Roads (DuPont Property)	0.0	0.21	2.33	0.0	2.54
T-Line ROW	0.0	17.97	4.38	0.18	22.53
T-Line Pull Sites Outside T-Line ROW	0.0	1.21	0.17	0.0	1.38
T-Line Access Roads Outside T-Line ROW	0.0	0.56	0.48	0.0	1.04
Force Main Sewer Line ROW	0.0	0.0	1.52	0.0	1.52
Total	16.7	38.4	20.4	3.0	78.5

Project Description

Concisely and completely describe the project and location. Reference and attach a project vicinity map (Figure 1) and the project site plans (Figure 2) for the proposed project. Include all activities proposed for site, including those disturbing ground (roads, bridges, outfalls, runoff treatment facilities, parks, trails, etc.) to ensure the entire project is covered by the HCP/NCCP permit. Also include proposed construction dates. Reference a City/County application number for the project where additional project details can be found.

City/County Application Number:

Anticipated Construction Date:

Second Quarter 2011 – Third Quarter 2013

Detailed Project Description and Land Cover Types:

Project Site

The project is located in Oakley, eastern Contra Costa County, California at 6000 Bridgehead Road. The project site is located in the northwestern quarter of Section 22, Township 2 North, Range 2 East, Mount Diablo Base and Meridian. Figure 1a is a map of the project vicinity. The proposed project parcel is located on a former DuPont manufacturing facility site (Figure 1b). Figure 2.1 shows the facility site plan and Figures 2.2a and 2.2b show typical elevation views of the project.

The project parcel is in an area of active vineyard agriculture with a central cluster of oak trees. The project parcel is bordered to the north by a narrow row of mature eucalyptus trees that separates the project parcel from the rest of the former DuPont manufacturing site with

intermittent strips of ruderal grassland surrounding the parcel. The western “panhandle” of the project parcel consists of a small conserved wetland, called Wetland E (discussed below). The project parcel consists of 21.95 contiguous acres, 13.9 acres of which are in agricultural production as a vineyard, 1.6 acres of which are the conservation easement for Wetland E, 3.0 acres of ruderal cover, 0.6 acres of non-native woodland, and 2.8 acres of paved surface (i.e., urban classification) (Table I.2a and Table I.2b).

Based on conversations with East Contra Costa County HCP/NCCP staff, the 21.95 acres would be considered a permanent impact under the HCP/NCCP, with the exception of the 1.6-acre Wetland E conservation easement and the 0.3-acre area immediately west of the Wetland E conservation easement. ESA and silt fencing will be installed to protect the 1.6-acre Wetland E conservation easement and the only activity in the Wetland E conservation easement will be associated with the enhancement of the easement. Therefore, it is assumed there are no negative project impacts which require mitigation for the conservation easement. The ground disturbance in the area between the Wetland E conservation easement and Bridgehead Road will be limited to minor disturbances associated with the installation of permanent facility fencing and implementation of the Wetland E conservation easement enhancement activities. The disturbed area between the Wetland E conservation easement and Bridgehead Road will be hydroseeded with native grass mix as part of the project within 2 years, therefore, the impacts in this area are considered temporary with the minimum 2 year impact duration (Table I.2b). The Wetland E enhancement activities are discussed later in this section.

Vegetation at the project parcel is vineyard agriculture consisting primarily of wine grapes (*Vitis vinifera*). A cluster of six interior live oak trees (*Quercus wislizeni*) is also present within the vineyard. Removal of the six interior live oaks will be coordinated with the City of Oakley’s tree removal permitting process. The remainder of the project parcel (2.68 acres) is vegetated with ruderal species such as ripgut brome (*Bromus diandrus*), redstem stork’s bill (*Erodium cicutarium*), miniature lupine (*Lupinus bicolor*), and common deerweed (*Lotus scoparius*). A row of Tasmanian blue gum (*Eucalyptus globulus*) lines the northern edge of the parcel and encompasses 0.6 acres. A total of six Eucalyptus trees within the row will be removed to incorporate a roadway between the parcels on either side. The removal of the Eucalyptus will be coordinated with the City of Oakley’s tree removal permitting process and a nesting bird survey will be conducted prior to removal. ESA fencing and silt fencing will be installed to protect the remaining Eucalyptus trees (Figure 3a).

An isolated wetland area, constructed in 1996 as mitigation for offsite impacts related to the Lauritzen Yacht Harbor, is adjacent to and part of the western end of the project parcel. The entire conservation easement area is 1.6 acres in size. The wetland receives runoff from the adjacent vineyard and from portions of the DuPont property. Common tule (*Schoenoplectus acutus*) and common cattail (*Typha latifolia*) are the dominant species present in the open water portion of the 0.62-acre wetland, while willows (*Salix lasiolepis*) dominate the narrow slope between the edge of water and top of the bank. The wetland easement is isolated from other wetlands, and hydrology is supported by direct precipitation, sheetflow runoff from Bridgehead Road, and surface water inputs from the project parcel.

This wetland, known as Wetland E, was delineated as part of a wetland delineation study of the entire DuPont property in 2006 (DuPont Engineering, 2007; 2008). The U.S. Army Corps of Engineers (USACE) declared this wetland to be non-jurisdictional because it lacks a connection to jurisdictional waters (is an isolated wetland) (Dady, 2008). This wetland, however, is under perpetual conservation easement. The Applicant has designed the OGS stormwater drainage system as a system of bioswales, in accordance with the Contra Costa County C.3 drainage design requirements and in consultation with the California Department of Fish and Game (CDFG), to ensure that existing drainage from the project parcel is not altered in a way that impairs this wetland.

The area within the Wetland E conservation easement will be protected by ESA fencing and silt barriers. Furthermore, the Applicant has also committed to enhance the quality of the Wetland E

conservation easement by implementing the biological enhancements listed below. The proposed enhancements are also presented in Figure 2.3:

- **Plant upland dune vegetation (~0.3 acre)**—This area is currently dominated by non-native grasses and herbs including noxious weeds. Locally collected and grown revegetation stock will be planted, maintained, and monitored for success for 5 years. Perennial herbs and shrubs will be planted as nursery-grown plugs on 2- to 3-foot centers and clustered by species. Native annual seed mixtures will be hand broadcast in the interspaces. Noxious weeds including pampas grass, yellow star thistle, and Russian thistle will be removed from the site. Replacement plantings will include native upland dune species (similar to the species in the Antioch Dunes National Wildlife Refuge) such as *Lupinus albifrons*, *Eriogonum nudum auriculatum*, *Lotus scoparius*, *Eschscholzia californica*, *Senecio douglasii*, *Gutierrezia californica*, *Heterotheca grandiflora*, *Clarkia unguiculata*, and *Croton californica*.
- **Replace non-native trees with coast live oak**—Introduced trees such as almond and tree-of-heaven will be removed and replaced with coast live oak.
- **Include native plants in the landscape screening plan required as a condition of certification by the CEC**—A fast-growing landscape screen will consist of 15-gallon coast live oak, underlain by 10-gallon evergreen shrubs (*Arctostaphylos manzanita*, *Fremontodendron californicum*, *Heteromeles arbutifolia* and *Myrica californica*), and 3-gallon plantings of small thorny evergreen shrubs (*Rosa californica* and *Mahonia pinnata*).

The stormwater drainage plan and proposed biological enhancements were submitted to the USFWS as part of the *Wetland E Management Plan for the Oakley Generating Station – Updated June 2010*. (CEC, 2010) The USFWS reviewed the proposed management plan and responded that it agreed with the proposed approach and goals for preserving the viability of Wetland E (CEC, 2010). Therefore, it is assumed that there are no adverse permanent or temporary biological impacts expected to occur within the Wetland E conservation easement which require mitigation under the HCP. A complete copy of the proposed Wetland E conservation easement enhancement plan is included in Attachment 1.

As described in Chapter 9 of the ECCCHC Habitat Conservation Plan and Natural Community Conservation Plan (ECCCHC, 2006), areas categorized as urban are exempted from mitigation fees. Based on conversations with ECCCHC staff, areas protected by ESA fencing and silt fencing are also exempted from mitigation fees. Therefore, the total permanent impact area that would require mitigation would be 16.7 acres (Table I.2a). The total temporary impact area that would require mitigation would be 0.3 acres (Table I.2b). The entire project parcel would be located within Development Fee Zone I.

Table I.2a
Permanent Project Impacts by Habitat Cover Category

Habitat Cover	Total Area (Acres)	Area Inside ESA Fencing (Acres)	Mitigation Acres Required	Fee Zone
Non-Native Woodland	0.60	0.52	0.08	I
Ruderal	2.68	0.0	2.68	I
Urban	2.82	0.0	0.0	I
Vineyard	13.94	0.0	13.94	I
Wetland E Conservation Easement	1.6	1.6	0.0	
Total (Fee Zone I)	21.64	2.12	16.70	

Table I.2.b

Temporary Project Area Impacts by Habitat Cover Category

Habitat Cover	Total Area (Acres)	Area Inside ESA Fencing (Acres)	Mitigation Acres Required	Years of Disturbance (minimum is 2 years per guidelines)	Fee Zone
Ruderal	0.30	0.0	0.30	2	I
Total (Fee Zone I)	0.30	0.0	0.30	2	

Construction Laydown Area

The proposed construction laydown area, construction parking, and stockpile areas are also located on the former DuPont manufacturing facility site (Figure 1b). The proposed construction laydown area is located east of the proposed project site and consists of DuPont's former titanium dioxide disposal site, which is approximately 13 acres of barren ground and ruderal vegetation, and a 6.5-acre paved area. A row of mature Eucalyptus trees is present along the southwest and southern boundary of the paved area. Several eucalyptus trees are also present along the top of a berm near the eastern edge of the paved area. ESA and silt fencing will be installed around the row of Eucalyptus trees and the group of trees growing in the ruderal grasslands (Figure 3a). Therefore, no tree removal is expected as part of the preparation of the construction laydown area. The construction laydown area will be accessed via the existing paved surfaces on the former DuPont facility. The total access road area on the former DuPont facility (Figure 3a) is quantified as part of the soil stockpile discussion.

Assuming the paved areas and the areas protected by ESA fencing do not require mitigation, the mitigation required for the total temporary construction laydown impact would be 13.1 acres (Table I.3). The entire construction laydown parcel would be located within Development Fee Zone I and it is assumed the disturbance and recovery would be approximately 4 years. Upon completion of the project, the unpaved areas, with the exception of the titanium dioxide disposal site, will be hydroseeded with native grass mix. The surface of the titanium dioxide disposal area will remain exposed, similar to the existing condition. The paved surfaces will remain paved. The best mitigation practices (BMPs) to be used during construction are discussed in Section IV.

Table I.3

Temporary Construction Laydown Area Impacts by Habitat Cover Category

Habitat Cover	Total Area (Acres)	Area Inside ESA Fencing (Acres)	Mitigation Acres Required	Years of Disturbance (minimum is 2 years per guidelines)	Fee Zone
Non-Native Woodland	0.61	0.57	0.04	4	I
Ruderal	13.22	0.13	13.09	4	I
Urban	6.48	0.0	0.0	4	I
Total (Fee Zone I)	20.31	0.70	13.13	4	

Soil Stockpile Areas

Soil from the project parcel will be temporarily stockpiled in three areas north of the project (Figure 3a). Stockpile area 1 (2.22 acres) will be located on an existing paved surface. Stockpile areas 2 (2.68 acres) and 3 (2.32 acres) are located further north in ruderal areas on either side of a row of salt cedar (*Tamarix* sp.). No tree removal is expected as part of the preparation of the soil stockpile areas, with the exception of some tree trimming to gain access to Stockpile Area 3. Stockpile area 2 is located in a regularly disked field south of the row of salt cedar trees and is 84 feet north of Wetland F (0.37-acre). Stockpile area 3 is north of the trees and is 46 feet south of Wetland D (0.38-acre). Common ruderal vegetation in these areas includes rat-tail fescue (*Vulpia myuros*), redmaids (*Calandrinia ciliata*), old-man-in-the-Spring (*Senecio vulgaris*), horseweed (*Conyza canadensis*), telegraph weed (*Heterotheca grandiflora*), Spanish clover

(*Acmispon americanus*), longspine sandbur (*Cenchrus longispinus*), Russian thistle (*Salsola tragus*) and puncture vine (*Tribulus terrestris*). Wetlands F and D are both classified as palustrine emergent and are outside the project parcel, the construction laydown area, and the soil stockpile areas. The soil stockpile areas will be accessed via existing paved and unpaved surfaces on the former DuPont facility.

Assuming the paved areas do not require mitigation, the mitigation required for the temporary stockpile impacts would be 5.0 acres (Table I.4a). It is estimated the access roads will be approximately 2.3 acres of paved surfaces and 0.2 acres of ruderal grassland (Table I.4b). The entire soil stockpile areas would be located within Development Fee Zone I and it is assumed the disturbance and recovery would be less than 2 years. During construction activities, stockpile areas 2 and 3 will be bermed with soil used from the project. The berm will be placed on the perimeter of the stockpiles, and the berm will be hydroseeded to help stabilize the berm. Geotextiles and mats may be used with other BMPs on stockpiles during the rainy season and during the windy dry season (with the watering BMP) to prevent erosion of the stockpiles. Upon completion of the project, the soil stockpiles will be stabilized and hydro-seeded with native grass mix. After this takes place, the soil stockpiles will be owned and maintained by DuPont in accordance with all applicable BMPs. The BMPs to be used are discussed in Section IV.

Table I.4a
Temporary Soil Stockpile Impacts by Habitat Cover Category

Habitat Cover	Total Area (Acres)	Area Inside ESA Fencing (Acres)	Mitigation Acres Required	Years of Disturbance (minimum is 2 years per guidelines)	Fee Zone
Ruderal	5.00	0.0	5.00	2	I
Urban	2.22	0.0	0.0	2	I
Total (Fee Zone I)	7.22	0.0	5.00	2	

Table I.4b
Temporary Access Road Impacts by Habitat Cover Category (Access Roads on DuPont Property)

Habitat Cover	Total Area (Acres)	Area Inside ESA Fencing (Acres)	Mitigation Acres Required	Years of Disturbance (minimum is 2 years per guidelines)	Fee Zone
Ruderal	0.21	0.0	0.21	2	I
Urban	2.33	0.0	0.0	2	I
Total (Fee Zone I)	2.54	0.0	0.21	2	

Electrical Transmission Line Route

The proposed 230-kV electrical transmission line will replace an existing 60-kV transmission line that runs approximately 2.4 miles south and west from OGS to the PG&E Contra Costa substation. The new 230-kV transmission line would require the replacement of 17 existing steel-lattice towers with 20 tubular steel poles and the extension of one existing 230-kV transmission tower (Figures 3a-3l). A plan view of the existing lattice transmission tower bases and the proposed steel pole bases are included in Figure 2.4. The existing 230-kV transmission tower will be extended 40 feet to allow clearance for the new 230-kV line associated with the project (Figure 3h). The existing ROW for the transmission line is 80 feet wide. Boring and installation of 16-square-foot concrete foundations at each of the tower locations will be required to provide subsurface support for the steel poles. Because the transmission line ROW is currently impacted by the existing towers, no additional permanent impacts are expected to result from construction of the proposed towers. Construction will require approximately 400 square feet of temporary vegetation clearance in each area where a transmission tower will be located. However, the

Applicant proposes to provide temporary impact mitigation for the entire existing 80-foot ROW to provide flexibility for the final installation design.

Within the City of Oakley, the transmission line crosses areas zoned for utility and commercial uses. Within the City of Antioch, the alignment is within areas zoned as Planned Development Districts (P-D) associated with the State Route 4 Industrial Frontage Focus Area (LSA, 2003). Although a portion of the transmission line route is within the City of Antioch, the project may be extended coverage through the ECCC HCP/NCCP as a Participating Special Entity.

The current 60-kV towers are located in a variety of land uses, including active industrial and commercial properties and paved roadways (categorized as urban), landscaped residential areas, vacant lots, and abandoned agricultural areas characterized by ruderal vegetation (categorized as ruderal), and active vineyard agricultural (categorized as vineyard), (Figures 3a through 3l). The transmission line right-of way also includes a small portion of riparian habitat and open water associated with East Antioch Creek (Figure 3j). This area will not be disturbed during tower installation and removal, but is located about 110 feet from an existing tower. Therefore, the area will be protected with ESA signage and sediment control BMPs to ensure no disturbance occurs in this area during construction activities (Figure 3j). Six trees were identified for removal as part of transmission line upgrade. Two of the six trees identified (Interior live oak) are protected under the Oakley Municipal Code, and the removal of these trees will be coordinated with the City of Oakley's tree removal permitting process. The remaining four trees include three almond and one ponderosa pine. The upgrade will be completed and the ROW will be restored within 2 years. The transmission tower locations are presented in Figures 3a through 3l and Figure 4.

Assuming the paved surfaces and areas protected by ESA and silt fencing do not require mitigation, the mitigation required for the temporary transmission line corridor impacts would be 18 acres (Table I.5). Approximately 5.6 acres are located in Development Fee Zone I. Although the City of Antioch is not a Permittee and does not have a designated fee zone, the HCP/NCCP uses a Zone IV fee schedule for PSE projects in the City of Antioch. Therefore, the remaining 12.4 acres will be located within Development Fee Zone IV. It is assumed the disturbance and recovery would take place in approximately 3 years. To avoid permanent impacts, the areas disturbed during the installation of 230-kV transmission line will be re-contoured and hydro-seeded to restore the nesting and foraging habitats to their current condition. A summary of the re-vegetation plan for each of the tower locations is included in Attachment 2. The BMPs to be used during construction are discussed in Section IV.

Table I.5
Temporary Transmission Line Corridor Impacts by Habitat Cover Category

Habitat Cover	Total Area (Acres)	Area Inside ESA Fencing (Acres)	Mitigation Acres Required	Years of Disturbance (minimum is 2 years per guidelines)	Fee Zone
Ruderal	3.28	0.0	3.28	3	I
Urban	2.78	0.0	0.0	3	I
Vineyard	2.34	0.0	2.34	3	I
Riparian	0.0	0.0	0.0	3	I
Total (Fee Zone I)	8.40	0.0	5.62	3	
Ruderal	9.65	0.0	9.65	3	IV
Urban	1.60	0.0	0.0	3	IV
Vineyard	2.70	0.0	2.70	3	IV
Riparian	0.18	0.18	0.0	3	IV
Total (Fee Zone IV)	14.13	0.18	12.35	3	

Transmission Line Pull Sites

The proposed transmission line pull and tensioning sites are located in a variety of land uses, including active industrial and commercial properties (categorized as urban), landscape residential/ruderal areas (categorized as ruderal), active vineyard agricultural (categorized as vineyard), and disturbed ruderal areas adjacent to the PG&E Contra Costa Substation (Figures 3b, 3f, and 3l). The areas in Table I.6a and I.6b represent the transmission pull site and access road areas outside the 80 foot transmission line ROW (see previous discussion for transmission line acreages). Note, the pull site access road through the vineyards on Figure 3f was classified as an urban land use because the road is currently used as an agricultural access road.

Assuming the urban areas do not require mitigation, the mitigation required for the temporary transmission line pull site impacts outside the existing T-line ROW would be 1.2 acres (Table I.6a). Approximately 0.3 acres are located in Development Fee Zone I. The remaining 0.9 acres will be located within Development Fee Zone IV. The mitigation required for the temporary transmission line pull site access road impacts outside the existing T-line ROW would be 0.6 acres (Table I.6b). Approximately 0.01 acres are located in Development Fee Zone I. The remaining 0.55 acres will be located within Development Fee Zone IV. It is assumed the disturbance and recovery would take place in approximately 3 years. The pull and tensioning sites will be re-contoured and restored to existing conditions following project construction. The re-vegetation plan for the pulling and tensioning sites will be similar to the transmission line corridor discussed above. The BMPs to be used during construction are discussed in Section IV.

Table I.6a

Temporary Transmission Line Pull Site Impacts Outside the Existing 80-foot T-Line ROW by Habitat Cover Category

Habitat Cover	Total Area (Acres)	Area Inside ESA Fencing (Acres)	Mitigation Acres Required	Years of Disturbance (minimum is 2 years per guidelines)	Fee Zone
Ruderal	0.09	0.0	0.09	3	I
Urban	0.17	0.0	0.0	3	I
Vineyard	0.24	0.0	0.24	3	I
Total (Fee Zone I)	0.50	0.0	0.33	3	
Ruderal	0.88	0.0	0.88	3	IV
Total (Fee Zone IV)	0.88	0.0	0.88	3	

Table I.6b

Temporary Transmission Line Access Roads Outside the Existing 80-foot T-Line ROW by Habitat Cover Category

Habitat Cover	Total Area (Acres)	Area Inside ESA Fencing (Acres)	Mitigation Acres Required	Years of Disturbance (minimum is 2 years per guidelines)	Fee Zone
Urban	0.48	0.0	0.0	3	I
Vineyard	0.006	0.0	0.006	3	I
Total (Fee Zone I)	0.49	0.0	0.006	3	
Ruderal	0.55	0.0	0.55	3	IV
Total (Fee Zone IV)	0.55	0.0	0.55	3	

Sanitary Sewer Force Main Corridor

A portion of the existing sanitary sewer extending from the project tie-in location on Bridgehead Road to the gravity main located in Main Street would have insufficient capacity for the project's sanitary sewer discharge. For this reason, OGS will construct a dedicated project sanitary sewer force main from the project site to an interconnection point in Main Street (Figures 3a through 3d). The new sanitary sewer will extend south from an interconnection point in Bridgehead Road for 0.33 miles to Main Street. It will then turn east and run for 0.11 miles to the interconnection point with Ironhouse Sanitary District's gravity main. The existing ROW assumed in the Habitat Survey for the force main is 30 feet wide. The existing force main is located under the paved road surface.

There are thin strips of ruderal vegetation along the sides of the road that consist of ripgut brome (*Bromus diandrus*), yellow star thistle (*Centaurea solstitialis*), Italian ryegrass (*Lolium multiflorum*), spiny sowthistle (*Sonchus asper*), telegraph weed (*Heterotheca grandiflora*), and wild oats (*Avena barbata*). Vegetation along the roadsides appears to be routinely sprayed with herbicide for weed control and fire suppression. In addition to the ruderal herbaceous vegetation, several trees are present along the shoulders of Bridgehead Road, including interior live oak (*Quercus wislizeni*), almond (*Prunus dulcis*), tree of heaven (*Ailanthus altissima*), and black walnut (*Juglans nigra*). The majority of these trees are less than 20 feet in height and there is evidence of routine trimming near the existing power lines that run adjacent to Bridgehead Road. No tree removal is expected as part of the force main installation.

It is assumed the force main will primarily impact areas within the existing paved roadway and that the ruderal areas impacted (less than 1.0 acre) are marginal areas already impacted by routine roadside maintenance. Furthermore, the upgrade will be completed and the ROW will be restored within one year. The pavement will be restored in Bridgehead Road and Main Street when construction is complete. Therefore, it is concluded that no mitigation will be required for the installation of the force main (Table I.7).

Table I.7
Temporary Force Main Impacts by Habitat Cover Category

Habitat Cover	Total Area (Acres)	Area Inside ESA Fencing (Acres)	Mitigation Acres Required	Fee Zone
Urban	1.52	0	0	I
Total (Fee Zone I)	1.52	0	0	I

II. Existing Conditions and Impacts

Land Cover Types

In completing the checklist in Table 1, click in the appropriate fields and type the relevant information. Please calculate acres of terrestrial land cover types to nearest tenth of an acre. Calculate the areas of all jurisdictional wetlands and waters land cover types to the nearest hundredth of an acre. If the field is not applicable, please enter N/A. The sum of the acreages in the *Acreage of land to be “permanently disturbed” and “temporarily disturbed” by project* column should equal the total impact acreage listed above.

Land cover types and habitat elements identified with an ^(a) in Table 1 require identification and mapping of habitat elements for selected covered wildlife species. In Table 2a and 2b below, check the land cover types and habitat elements found in the project area and describe the results. Insert a map of all land cover types present onsite and other relevant features overlaid on an aerial photo below as Figure 3.

Table 1

Land Cover Types on the Project Site as Determined in the Field and Shown in Figure 3.

Land Cover Type (acres, except where noted)	Impact Acres on the following segments of the Project: Project Site, Laydown Areas, and Soil Stockpile Areas		Impacts on the Electrical Transmission Line Route, Pull Sites, and Force Main	
	Acreage of Land to be “Permanently Disturbed” by Project ^b	Acreage of Land to be “Temporarily Disturbed” by Project ^b	Acreage of Land to be “Permanently Disturbed” by Project ^b	Acreage of Land to be “Temporarily Disturbed” by Project ^b
Grassland^a				
<input type="checkbox"/> Annual grassland	NA	NA	NA	NA
<input type="checkbox"/> Alkali grassland	NA	NA	NA	NA
<input checked="" type="checkbox"/> Ruderal	2.7-acres	18.6-acres	NA	14.5-acres
<input type="checkbox"/> Chaparral and scrub	NA	NA	NA	NA
<input type="checkbox"/> Oak savanna^a	NA	NA	NA	NA
<input type="checkbox"/> Oak woodland	NA	NA	NA	NA
Jurisdictional wetlands and waters				
<input type="checkbox"/> Riparian woodland/scrub	NA	NA	NA	NA
<input type="checkbox"/> Permanent wetland ^a	NA	NA	NA	NA
<input type="checkbox"/> Seasonal wetland ^a	NA	NA	NA	NA
<input type="checkbox"/> Alkali wetland ^a	NA	NA	NA	NA
<input type="checkbox"/> Aquatic (Reservoir/ Open Water) ^a	NA	NA	NA	NA
<input type="checkbox"/> Slough/Channel ^a	NA	NA	NA	NA
<input type="checkbox"/> Pond ^a	NA	NA	NA	NA
<input type="checkbox"/> Stream (acres) ^{a, d}	NA	NA	NA	NA

Table 1

Land Cover Types on the Project Site as Determined in the Field and Shown in Figure 3.

Land Cover Type (acres, except where noted)	Impact Acres on the following segments of the Project: Project Site, Laydown Areas, and Soil Stockpile Areas		Impacts on the Electrical Transmission Line Route, Pull Sites, and Force Main	
	Acreage of Land to be "Permanently Disturbed" by Project ^b	Acreage of Land to be "Temporarily Disturbed" by Project ^b	Acreage of Land to be "Permanently Disturbed" by Project ^b	Acreage of Land to be "Temporarily Disturbed" by Project ^b
<input type="checkbox"/> Total stream length (feet) ^{a, d}	NA	NA	NA	NA
Stream length by width category				
<input type="checkbox"/> ≤ 25 feet wide	NA	NA	NA	NA
<input type="checkbox"/> > 25 feet wide	NA	NA	NA	NA
Stream length by type and order ^e				
<input type="checkbox"/> Perennial	NA	NA	NA	NA
<input type="checkbox"/> Intermittent	NA	NA	NA	NA
<input type="checkbox"/> Ephemeral, 3 rd or higher order	NA	NA	NA	NA
<input type="checkbox"/> Ephemeral, 1 st or 2 nd order	NA	NA	NA	NA
Irrigated agriculture^a				
<input type="checkbox"/> Cropland	NA	NA	NA	NA
<input type="checkbox"/> Pasture	NA	NA	NA	NA
<input type="checkbox"/> Orchard	NA	NA	NA	NA
<input checked="" type="checkbox"/> Vineyard	13.9-acres	NA	NA	5.3-acres
Other				
<input checked="" type="checkbox"/> Nonnative woodland	0.04-acres	NA	NA	NA
<input type="checkbox"/> Wind turbines	NA	NA	NA	NA
Developed*				
<input checked="" type="checkbox"/> Urban	2.8-acres	11.0-acres	NA	6.6-acres
<input type="checkbox"/> Aqueduct	NA	NA	NA	NA
<input type="checkbox"/> Turf	NA	NA	NA	NA
<input type="checkbox"/> Landfill	NA	NA	NA	NA
Uncommon Vegetation Types (subtypes of above land cover types)				
<input type="checkbox"/> Purple needlegrass grassland	NA	NA	NA	NA
<input type="checkbox"/> Wildrye grassland	NA	NA	NA	NA
<input type="checkbox"/> Wildflower fields	NA	NA	NA	NA
<input type="checkbox"/> Squirreltail grassland	NA	NA	NA	NA
<input type="checkbox"/> One-sided bluegrass grassland	NA	NA	NA	NA
<input type="checkbox"/> Serpentine grassland	NA	NA	NA	NA

Table 1

Land Cover Types on the Project Site as Determined in the Field and Shown in Figure 3.

Land Cover Type (acres, except where noted)	Impact Acres on the following segments of the Project: Project Site, Laydown Areas, and Soil Stockpile Areas		Impacts on the Electrical Transmission Line Route, Pull Sites, and Force Main	
	Acreage of Land to be "Permanently Disturbed" by Project ^b	Acreage of Land to be "Temporarily Disturbed" by Project ^b	Acreage of Land to be "Permanently Disturbed" by Project ^b	Acreage of Land to be "Temporarily Disturbed" by Project ^b
<input type="checkbox"/> Saltgrass grassland (= alkali grassland)	NA	NA	NA	NA
<input type="checkbox"/> Alkali sacaton bunchgrass grassland	NA	NA	NA	NA
<input type="checkbox"/> Other uncommon vegetation types (please describe)	NA		NA	NA
Uncommon Landscape Features or Habitat Elements				
<input type="checkbox"/> Rock outcrop	NA	NA	NA	NA
<input type="checkbox"/> Cave ^a	NA	NA	NA	NA
<input type="checkbox"/> Springs/seeps	NA	NA	NA	NA
<input type="checkbox"/> Scalds	NA	NA	NA	NA
<input type="checkbox"/> Sand deposits	NA	NA	NA	NA
<input type="checkbox"/> Mines ^a	NA	NA	NA	NA
<input type="checkbox"/> Buildings (bat roosts) ^a	NA	NA	NA	NA
<input checked="" type="checkbox"/> Potential nest sites (trees or cliffs) ^a	NA	NA	NA	NA
TOTAL (*Developed acre types)	2.8-acres	11.0-acres	0.0-acres	6.6-acres
TOTAL (Acre to be impacted, minus the developed acre types)	16.7-acres	18.6-acres	0.0-acres	19.8-acres

^a Designates habitat elements that may trigger specific survey requirements and/or best management practices for key covered wildlife species. See Chapter 6 in the HCP/NCCP for details.

^b See Section 9.3.1 of the HCP/NCCP for a definition of "permanently disturbed" and "temporarily disturbed." In nearly all cases, all land in the subject parcel is considered permanently disturbed.

^c Dedication of land in lieu of fees must be approved by the local agency and the Implementing Entity before they can be credited toward HCP/NCCP fees. See Section 8.6.7 on page 8-32 of the Plan for details on this provision. Stream setback requirements are described in Conservation Measure 1.7 in Section 6.4.1 and in Table 6-2.

^d Specific requirements on streams are discussed in detail in the HCP/NCCP. Stream setback requirements pertaining to stream type and order can be found in Table 6-2. Impact fees and boundary determination methods pertaining to stream width can be found in Table 9-5. Restoration/creation requirements in lieu of fees depend on stream type and can be found in Tables 5-16 and 5-17.

^e See glossary (Appendix A) for definition of stream type and order.

Field-Verified Land Cover Map

Insert field-verified land cover map. The map should contain all land cover types present on-site. The map should be representative of an aerial photo. Identify all pages of the field-verified land cover map as **(Figure 3a)**. **Please attach representative photos of the project site (Figure 3b).**

See attached Figures 3a-3l, Land Cover Survey Maps.

Jurisdictional Wetlands and Waters

Jurisdictional wetlands and waters are defined on pages 1-18 and 1-19 of the Final HCP/NCCP as the following land cover types: permanent wetland, seasonal wetland, alkali wetland, aquatic, pond, slough/channel, and stream. (It should be noted that definitions of these features differ for state and federal jurisdictions.) If you have identified any of these land cover types to be present on the project site in Table 1, complete the section below.

Indicate agency that certified the wetland delineation:

☒ USACE, ☐ RWQCB, or ☐ the ECCC Habitat Conservancy.

☐ Wetland delineation is attached (Jurisdictional Determination)

Provide any additional information on Impacts to Jurisdictional Wetland and Waters below.

Project Parcel

An isolated wetland area, constructed in 1996 as mitigation for offsite impacts related to the Lauritzen Yacht Harbor, is adjacent to and part of the western end of the project parcel. The entire conservation easement area is 1.6 acres in size. The wetland receives runoff from the adjacent vineyard and from portions of the DuPont property. Common tule (*Schoenoplectus acutus*) and common cattail (*Typha latifolia*) are the dominant species present in the 0.62-acre wetland, while arroyo willows (*Salix lasiolepis*) dominate the narrow slope between the edge of water and top of the bank. The wetland easement is isolated from other wetlands, and hydrology is supported by direct precipitation, sheetflow runoff from Bridgehead Road, and surface water inputs from the project parcel.

This wetland, known as Wetland E, was delineated as part of a wetland delineation study of the entire DuPont property in 2006 (DuPont Engineering, 2007; DuPont Engineering, 2008). The USACE declared this wetland to be non-jurisdictional because it lacks a connection to jurisdictional waters (is an isolated wetland) (Dady, 2008). This wetland, however, is under perpetual conservation easement. The Applicant has designed the stormwater drainage system as a system of bioswales, in accordance with the Contra Costa County C.3 drainage design requirements and in consultation with CDFG, to ensure that existing drainage from the project parcel is not altered in a way that impairs this wetland.

Transmission Line Route

The transmission line will traverse East Antioch Creek; (see Figure 3j, Land Cover Habitat Survey); however, the nearest tower replacement and removal will take place 120-feet up slope from this feature. East Antioch Creek eventually flows into Lake Alhambra and then into the San Joaquin River. Access to the tower areas will be by an existing paved and earthen walking trail that crosses the wetland via a culvert. It is expected that ESA fencing will be installed to protect the riparian and creek habitat in this area. Therefore, there will be no impact to this wetland or riparian area.

Species-Specific Planning Survey Requirements

Based on the land cover types found on-site and identified in Table 1, check the applicable boxes in Table 2a then provide the results of the planning surveys below. In Table 3 check corresponding preconstruction survey or notification requirements that are triggered by the presence of particular landcover types or species habitat elements as identified in Table 2a. The species-specific planning survey requirements are described in more detail in Section 6.4.3 of the HCP/NCCP.

Table 2a

Species-Specific Planning Survey Requirements Triggered by Land Cover Types and Habitat Elements in the Project Area Based on Chapter 6 of the Final HCP/NCCP

Land Cover Type in the project area?	Species	Habitat Element in the project area?	Planning Survey Requirement
<input checked="" type="checkbox"/> Grasslands, oak savanna, agriculture, ruderal	San Joaquin kit fox	Assumed if within modeled range of species	Identify and map potential breeding and denning habitat and potential dens if within modeled range of species (see Appendix D of HCP/NCCP).
	Western burrowing owl	Assumed	Identify and map potential breeding habitat.
<input checked="" type="checkbox"/> Aquatic (ponds, wetlands, streams, slough, channels, & marshes)	Giant garter snake	<input checked="" type="checkbox"/> Aquatic habitat accessible from San Joaquin River	Identify and map potential habitat.
	California tiger salamander	<input checked="" type="checkbox"/> Ponds and wetlands in grassland, oak savanna, oak woodland <input type="checkbox"/> Vernal pools <input type="checkbox"/> Reservoirs <input type="checkbox"/> Small lakes	Identify and map potential breeding habitat. Document habitat quality and features. Provide Implementing Entity with photo-documentation and report.
	California red-legged frog	<input checked="" type="checkbox"/> Slow-moving streams, ponds, and wetlands	Identify and map potential breeding habitat. Document habitat quality and features. Provide Implementing Entity with photo-documentation and report.
<input type="checkbox"/> Seasonal wetlands	Covered shrimp*	<input type="checkbox"/> Vernal pools <input type="checkbox"/> Sandstone rock outcrops <input type="checkbox"/> Sandstone depressions	Identify and map potential breeding habitat.

Table 2a

Species-Specific Planning Survey Requirements Triggered by Land Cover Types and Habitat Elements in the Project Area Based on Chapter 6 of the Final HCP/NCCP

Land Cover Type in the project area?	Species	Habitat Element in the project area?	Planning Survey Requirement
Any	Townsend's big-eared bat	<input type="checkbox"/> Rock formations with caves <input type="checkbox"/> Mines <input type="checkbox"/> Abandoned buildings outside urban areas	Map and document potential breeding or roosting habitat.
	Swainson's hawk	<input checked="" type="checkbox"/> Potential nest sites (trees within species' range usually below 200')	Inspect large trees for presence of nest sites.
	Golden eagle	<input checked="" type="checkbox"/> Potential nest sites (secluded cliffs with overhanging ledges; large trees)	Document and map potential nests.
*Vernal pool fairy shrimp, vernal pool tadpole shrimp, longhorn fairy shrimp, and midvalley fairy shrimp.			

Results of Species-Specific Planning Surveys Required in Table 2a

1. Describe the results of the planning survey conducted as required in Table 2a. Planning surveys will assess the location, quantity, and quality of suitable habitat for specified covered wildlife species on the project site. Covered species are assumed to occupy suitable habitat in impact areas and mitigation is based on assumption of take.

Biological Surveys

Biological field surveys of the project parcel, construction laydown areas, stockpile areas, the transmission line route, and the force main were conducted by the following CH2M HILL biologists: Michael Clary on March 4 and April 13, 2009; Dan Williams on April 13, 2009; and Richard Crowe on January 15, February 17, April 22, August 5, and October 22, 2010. Botanical surveys of the project parcel, construction laydown areas, stockpile areas, and the transmission line route were performed by consulting botanist Virginia Danes on March 4, 2009, and by CH2M HILL botanist Russell Huddleston on April 22, and October 22, 2010.

Biological resources evaluated for project impacts included plant communities, wildlife habitat, wetlands, and special-status species within the temporary and permanent project site and transmission line and force main ROW. Information obtained during the literature review and field surveys was used to determine which special-status species might have the potential to occur within the project parcel and along the transmission line and force main ROWs. Information on species status, habitat preferences, geographic distribution, elevation range, and known locations near the project site was researched before starting the field surveys.

Habitat and plant community surveys were conducted within a 1-mile radius of the proposed project parcel and within 1,000 feet of the proposed single-pole electrical transmission tower footings and within the ROW for the force main. Plant community and wildlife habitat assessments were conducted within the survey area to determine whether sensitive habitats occur within or near the project parcel, electrical transmission towers, or within the force main

ROW. A cumulative wildlife species observed during biological surveys is included as Attachment 3.

San Joaquin Kit Fox

The San Joaquin kit fox is a federally listed endangered species and a California state listed threatened species. The ECCC HCP/NCCP states that San Joaquin kit fox may occur in a variety of habitats, including grasslands, scrublands, vernal pool areas, alkali meadows, and playas, and in an agricultural matrix of row crops, irrigated pastures, orchards, vineyards, and grazed annual grasslands (U.S. Fish and Wildlife Service [USFWS], 1998). They prefer habitats with loose-textured soils (Grinnell et al., 1937; Hall, 1946; Egoscue, 1962) that are suitable for digging, but they occur on virtually every soil type. Dens are generally located in open areas with grass or grass and scattered brush and seldom occur in areas with thick brush. Preferred sites are relatively flat, well-drained terrain (USFWS, 1998; Roderick and Mathews, 1999). They are seldom found in areas with shallow soils due to high water tables (McCue et al., 1981) or impenetrable bedrock or hardpan layers (O'Farrell and Gilbertson, 1979; O'Farrell et al., 1980). However, kit foxes may occupy soils with a high clay content where they can modify burrows dug by other animals such as ground squirrels (*Spermophilus beecheyi*) (Orloff et al., 1986). In the northern part of its range (including San Joaquin, Alameda, and Contra Costa Counties), where most habitat on the valley floor has been eliminated, kit foxes now occur primarily in foothill grasslands (Swick, 1973; Hall, 1983; USFWS, 1998), valley oak savanna, and alkali grasslands (Bell, 1994). Less frequently, they occur adjacent to and forage in tilled and fallow fields and irrigated row crops (Bell, 1994). Kit foxes will den within small parcels of native habitat that is surrounded by intensively maintained agricultural lands (Knapp, 1978) and is adjacent to dryland farms (Jensen, 1972; Orloff et al., 1986; USFWS, 1998).

The ECCC HCP/NCCP indicates that the project parcel is adjacent to the reported range of this species and is within modeled potential habitat. The nearest reported San Joaquin kit fox siting is 5 miles southwest of the project parcel in non-native annual grassland containing a small drainage (CNDDDB, 2009).

No San Joaquin kit foxes were observed on the project site or within the transmission line and force main survey areas; however, potential habitat for this species is present in ruderal grasslands and vineyards in the areas surveyed. A potential burrow was observed in a berm associated with a row of Tasmanian blue gum trees near the eastern edge of the laydown area. This burrow has been observed collapsed with no sign of use during the 2010 surveys. Also, numerous large burrows exist within un-landscaped portions of the transmission line ROW. These burrows were also surveyed for sign of use with negative results. Participation in the HCP and adherence to HCP conservation measures will ensure impacts are avoided and actions are taken to benefit the species.

Western Burrowing Owl

The western burrowing owl is a California state species of special concern. Additionally, it is protected under the Migratory Bird Treaty Act (MBTA) and several CDFG codes, including 3503, 3503.5, and 3513. This species is widespread throughout the western United States but has declined in Contra Costa County and many other areas because of habitat modification, poisoning of its prey, and introduced nest predators. The western burrowing owl is diurnal and usually non-migratory in this portion of its range. This species is known to establish nests within abandoned burrows from ground squirrels and other wildlife. The species can occur in much higher densities near agricultural lands where rodent and insect prey tend to be more abundant. Western burrowing owl conservation is tied to the preservation and management of open agricultural lands, similar to Swainson's hawk habitats.

Two western burrowing owl occurrences are reported in the CNDDDB within 1,000 feet of the electrical transmission line corridor (Figure 5). Occurrence #947 is a report from November 2005 of one pair and one adult in open, level grassland with low-lying shrubs, sandy soils, and ruderal vegetation. Occurrence #1210 is a report from June 2006 of two adults in sandy, non-native annual grassland north of a freshwater marsh associated with East Antioch Creek.

No western burrowing owls or burrows were observed by CH2M HILL biological survey staff during field surveys conducted on the project parcel, construction laydown areas, stockpile areas, transmission line or force main ROW; however, the areas in and around the project parcel and transmission line ROW provide suitable western burrowing owl nesting and foraging habitat. Since no burrowing owls were present passive relocation of nesting or occupied burrows is not expected. However, if occupied burrows for burrowing owls are not avoided, passive relocation will be implemented. Owls should be excluded from burrows in the immediate impact zone and within a 160-foot buffer zone by installing one-way doors in burrow entrances. These doors should be in place for 48 hours prior to excavation. The project area should be monitored daily for 1 week to confirm that the owl has abandoned the burrow. Whenever possible, burrows should be excavated using hand tools and refilled to prevent reoccupation (California Department of Fish and Game 1995). Plastic tubing or a similar structure should be inserted in the tunnels during excavation to maintain an escape route for any owls inside the burrow.

California Tiger Salamander (CTS)

The nearest occurrence of CTS is approximately 2.5 miles southwest of the connection of the transmission line corridor to the PG&E Contra Costa Substation. The OGS project will primarily affect agricultural lands that border the project area. While there are two seasonal wetlands adjacent to the stock pile areas and Wetland E is located within the project parcel, these identified habitats are considered very marginal CTS habitat because of their very short ponding duration. Therefore, because of the significant distance between known CTS occurrences and the project area and the marginal nature of the habitat, this project is not expected to have an effect on CTS dispersal habitat.

Although no impacts to CTS are expected, ESA fencing and "Sensitive Resource" signage will keep construction personnel out of aquatic habitats. The CEC Designated Biologist and Biological Monitors will also take special consideration around project waterways to ensure impacts are avoided and actions are taken to benefit the species.

California Red-legged Frog (CRLF)

The CRLF (*Rana aurora draytonii*) is federally listed as threatened and state listed as a species of special concern. The CRLF is the largest native frog in the western United States, ranging from 4 to 13 centimeters long. The abdomen and hind legs of adults are largely red. The back has small black flecks and larger irregular dark blotches; lateral folds are prominent on the back. The CRLF occupies a fairly distinct habitat, combining both specific aquatic and riparian components. Adults need dense, shrubby, or emergent riparian vegetation closely associated with deep (greater than 2-1/3-foot deep), still, or slow-moving water. CRLF breed from November through March with earlier breeding records occurring in southern localities. In areas where frogs have been found in the vicinity and suitable habitat is present, the USFWS advises that suitable habitat accessible to frog populations occurring within five miles should be presumed to be occupied by the species (USFWS, 2010).

The closest occurrence of CRLF is 3.5 miles southwest of the project parcel and transmission line corridor. The only suitable habitat for CRLF is along the transmission line ROW where it intersects East Antioch Creek (see Figure 3j, Land Cover Habitat Survey). This feature flows from a culvert that begins at the transmission line ROW and becomes an open meandering stream with emergent vegetation as it flows north to Lake Alhambra and eventually to the San Joaquin River. Access to this area of the transmission line ROW will be via an existing paved access road that turns into an earthen road. In addition, ESA, silt fencing and sensitive resource signage will be installed at the top of slope at the Alhambra Creek crossing which will help insure that the project does not have an effect on CRLF.

Giant Garter Snake (GGS)

The giant garter snake (*Thamnophis gigas*), which is federally listed threatened and state listed threatened, inhabits agricultural wetlands and other waterways such as irrigation and drainage canals, sloughs, ponds, small lakes, low gradient streams, and adjacent uplands in the Central

Valley. Because of direct loss of natural habitat, the giant garter snake now relies heavily on marginal habitat such as rice fields, agricultural canals, and managed marsh areas. This species is typically absent from larger rivers because of lack of suitable habitat and emergent vegetative cover, and it is absent from wetlands with sand, gravel, or rock substrates. Giant garter snakes feed primarily on small fishes, tadpoles, and frogs. Habitat requirements consist of adequate water during the snake's active season (early-spring through mid-fall) to provide food and cover; emergent, herbaceous wetland vegetation, such as cattails and bulrushes, for escape cover and foraging habitat during the active season; grassy banks and openings in waterside vegetation for basking; and higher elevation uplands for cover and refuge from flood waters during the snake's dormant season in the winter. They breed from March and April through late July and early September (USFWS, 2004).

The closest occurrence of GGS is on Sherman Island near the northern bank of the San Joaquin River, 1.3 miles north of the project parcel and transmission line corridor. The only suitable habitat for GGS is along the transmission line ROW where it intersects East Antioch Creek (see Figure 3j, Land Cover Habitat Survey). East Antioch Creek flows from a culvert that begins at the transmission line ROW and becomes an open meandering stream with emergent vegetation as it flows north to Lake Alhambra and eventually to the San Joaquin River. In addition, ESA, silt fencing and sensitive resource signage will be installed at the top of slope at the East Antioch Creek crossing which will help insure that the project does not have an effect on GGS.

Swainson's hawk

Swainson's hawks generally inhabit a variety of open habitats. In California's Central Valley, suitable primary habitat consists of suitable nest trees and proximity to high-quality foraging habitat. This species nests within riparian forest or in remnant riparian trees, and it forages in agricultural lands such as fallow fields and alfalfa fields (Estep, 1989; Babcock, 1995). Swainson's hawks also use isolated trees near forage habitat. Agricultural patterns and cover types influence suitability of foraging and home-range habitat. Habitat with the highest foraging value includes ruderal fields, fallow fields, grain crops, and alfalfa fields.

The project parcel is near the edge of Swainson's hawk summer range (Zeiner et al., 1998) and is adjacent to areas identified in the ECCC HCP/NCCP as suitable nesting and foraging habitat. As reported in the CNDDDB, the nearest Swainson's hawk occurrence (occurrence #1312) was observed 3.7 miles southeast of the project parcel in a eucalyptus tree surrounded by agricultural fields.

The project site contains marginal Swainson's hawk nesting and foraging habitat; however, Swainson's hawk were observed foraging above grasslands near the soil stockpile areas north of the project parcel during field surveys, and large trees are present within the project parcel that could provide suitable nesting habitat. Potential ruderal grassland foraging habitat is also located in the laydown area and at the western end of the transmission line.

Golden Eagle

No known nesting habitat for bald eagles is present within 10 miles of the project parcel; however, these species may forage in the San Joaquin River and may occasionally forage over the project parcel and in nearby open areas. The eucalyptus trees at the site may provide suitable winter roosting habitat. Bald eagles have been reported in the project region through the Audubon Society Christmas Bird Counts (National Audubon Society, Inc., 2009).

Habitat for golden eagles is typically rolling foothills, mountain areas, and desert. Golden eagles need open terrain for hunting and prefer grasslands, deserts, savannah, and early successional stages of forest and shrub habitats. This species prefers to nest in rugged, open habitats with canyons and escarpments and with overhanging ledges and cliffs and large trees used as cover. Golden eagles are reported in the region by the Christmas Bird Counts and the CNDDDB. The nearest golden eagle occurrence reported in the CNDDDB (occurrence #145) is a nest observed in blue oak savannah and grasslands approximately 9.8 miles southwest of the project parcel in the Diablo Range.

2. Reference and attach the Planning Survey Species Habitat Maps as required in Table 2a.

Results of focused species surveys encompassed the following species and were mapped on the Land Cover Habitat Survey Maps where observed;

San Joaquin Kit Fox, no San Joaquin Kit Fox were observed during the surveys. Potential habitat observed included a collapsed large mammal den on the OGS project site (Figure 3a), and enlarged ground squirrel burrows along the transmission line route (Figure 3g).

Western Burrowing Owl, No western burrowing owls or burrows were observed by CH2M HILL biological survey staff during field surveys. Potential habitat observed consisted of enlarged ground squirrel burrows along the transmission line route (Figure 3g).

California Tiger salamander, marginal CTS or CTS habitat were observed during the surveys. All wetlands will be protected by silt fencing and ESA fencing as well as "Sensitive Resource" signage. The potential marginal habitat areas are noted on Figure 3a.

California Red-legged Frog, no CRLF were observed during the surveys. Potential CRLF habitat area is noted on Figure 3j (East Antioch Creek).

Giant Garter Snake, no GGS were observed by CH2M HILL biological staff during field surveys. Potential GGS habitat area is noted on Figure 3j (East Antioch Creek).

Swainson's Hawk, no Swainson's hawk nest sites were observed by CH2M HILL biological staff during field surveys, therefore there are no mapped occurrences.

Golden Eagle, no Golden Eagle nest sites were observed by CH2M HILL biological staff during field surveys, therefore there are no mapped occurrences.

Covered and No-Take Plants

On suitable land cover types, surveys for covered and no-take plants must be conducted using approved CDFG/USFWS methods during the appropriate season to identify any covered or no-take plant species that may occur on the site (see page 6-9 of the Final HCP/NCCP). Based on the land cover types found in the project area and identified in Table 1, check the applicable boxes in Table 2b and provide a summary of survey results as required below. If any no-take plants are found in the project area, the provisions of Conservation Measure 1.11 must be followed (see *Avoidance and Minimization Measures* below).

Table 2b

Covered and No-Take Plant Species, Typical Habitat Conditions, and Typical Blooming Periods

Land Cover Type in the project area?	Plant Species	Covered (C) or No-Take (N)?	Typical Habitat or Physical Conditions, if Known	Typical Blooming Period ^a
<input type="checkbox"/> Oak savanna	Diablo Helianthella (<i>Helianthella castanea</i>)	C	Elevation above 650 feet ^b	Mar–Jun
	Mount Diablo fairy-lantern (<i>Calochortus pulchellus</i>)	C	Elevation between 650 and 2,600 feet ^b	Apr–Jun
<input type="checkbox"/> Oak woodland	Brewer's dwarf flax (<i>Hesperolinon breweri</i>)	C		May–Jul
	Diablo Helianthella (<i>Helianthella castanea</i>)	C	Elevation above 650 feet ^b	Mar–Jun

Table 2b

Covered and No-Take Plant Species, Typical Habitat Conditions, and Typical Blooming Periods

Land Cover Type in the project area?	Plant Species	Covered (C) or No-Take (N)?	Typical Habitat or Physical Conditions, if Known	Typical Blooming Period ^a
<input type="checkbox"/> Chaparral and scrub	Mount Diablo fairy-lantern (<i>Calochortus pulchellus</i>)	C	Elevation between 650 and 2,600 feet ^b	Apr–Jun
	Showy madia (<i>Madia radiata</i>)	C		Mar–May
	Brewer's dwarf flax (<i>Hesperolinon breweri</i>)	C		May–Jul
	Diablo Helianthella (<i>Helianthella castanea</i>)	C	Elevation above 650 feet ^b	Mar–Jun
	Mount Diablo buckwheat (<i>Eriogonum truncatum</i>)	N		Apr–Sep; uncommonly Nov–Dec.
	Mount Diablo fairy-lantern (<i>Calochortus pulchellus</i>)	C	Elevation between 650 and 2,600 feet ^b	Apr–Jun
<input type="checkbox"/> Alkali grassland	Mount Diablo Manzanita (<i>Arctostaphylos auriculata</i>)	C	Elevation between 700 and 1,860 feet; restricted to the eastern and northern flanks of Mt. Diablo ^b	Jan–Mar
	Brittlescale (<i>Atriplex depressa</i>)	C	Restricted to soils of the Pescadero or Solano soil series; generally found in southeastern region of plan area ^b	May–Oct
	Caper-fruited tropidocarpum (<i>Tropidocarpum capparideum</i>)	N		Mar–Apr
	Contra Costa goldfields (<i>Lasthenia conjugens</i>)	N	Generally found in vernal pools	Mar–Jun
	Recurved larkspur (<i>Delphinium recurvatum</i>)	C		Mar–Jun
	San Joaquin spearscale (<i>Atriplex joaquiniana</i>)	C		Apr–Oct
<input type="checkbox"/> Alkali wetland	Alkali milkvetch (<i>Astragalus tener</i> ssp. <i>tener</i>)	N		Mar–Jun
	Brittlescale (<i>Atriplex depressa</i>)	C	Restricted to soils of the Pescadero or Solano soil series; generally found in southeastern region of plan area ^b	May–Oct

Table 2b

Covered and No-Take Plant Species, Typical Habitat Conditions, and Typical Blooming Periods

Land Cover Type in the project area?	Plant Species	Covered (C) or No-Take (N)?	Typical Habitat or Physical Conditions, if Known	Typical Blooming Period ^a
<input type="checkbox"/> Annual grassland	San Joaquin spearscale (<i>Atriplex joaquiniana</i>)	C		Apr–Oct
	Alkali milkvetch (<i>Astragalus tener</i> ssp. <i>tener</i>)	N		Mar–Jun
	Big tarplant (<i>Blepharizonia plumosa</i>)	C	Elevation below 1500 feet ^b	Jul–Oct
	Brewer's dwarf flax (<i>Hesperolinon breweri</i>)	C	Restricted to grassland areas within a 500+ buffer from oak woodland and chaparral/scrub ^b	May–Jul
	Contra Costa goldfields (<i>Lasthenia conjugens</i>)	N	Generally found in vernal pools	Mar–Jun
	Diamond-petaled poppy (<i>Eschscholzia rhombipetala</i>)	N		Mar–Apr
	Large-flowered fiddleneck (<i>Amsinckia grandiflora</i>)	N		Apr–May
	Mount Diablo buckwheat (<i>Eriogonum truncatum</i>)	N		Apr–Sep; uncommonly Nov–Dec
	Mount Diablo fairy-lantern (<i>Calochortus pulchellus</i>)	C	Elevation between 650 and 2,600 ^b	Apr–Jun
	Round-leaved filaree (<i>California macrophylla</i>) ¹	C		Mar–May
<input type="checkbox"/> Seasonal wetland	Showy madia (<i>Madia radiata</i>)	C		Mar–May
	Adobe navarretia (<i>Navarretia nigelliformis</i> ssp. <i>nigelliformis</i>)	C	Generally found in vernal pools ^b	Apr–Jun
	Alkali milkvetch (<i>Astragalus tener</i> sp. <i>tener</i>)	N		Mar–Jun
	Contra Costa goldfields (<i>Lasthenia conjugens</i>)	N	Generally found in vernal pools	Mar–Jun

^a From California Native Plant Society. 2007. *Inventory of Rare and Endangered Plants* (online edition, v7-07d). Sacramento, CA. Species may be identifiable outside of the typical blooming period; a professional botanist shall determine if a covered or no take plant occurs on the project site.

^b See Species Profiles in Appendix D of the Final HCP/NCCP.

Results of Covered and No-Take Plant Species Planning Surveys Required in Table 2b

Describe the results of the planning survey conducted as required in Table 2b. Describe the methods used to survey the site for all covered and no-take plants, including the dates and times of all surveys conducted (see Tables 3-8 and 6-5 of the HCP/NCCP for covered and no-take plants). In order to complete all the necessary covered and no-take plant surveys, both spring and fall surveys are required, check species survey requirements below.

If any covered or no-take plants were found, include the following information in the results summary:

- Description and number of occurrences and their rough population size.
- Description of the “health” of each occurrence, as defined on pages 5-49 and 5-50 of the HCP/NCCP.
- A map of all the occurrences.
- Justification of surveying time window, if outside of the plant’s blooming period.
- The CNDDDB form(s) submitted to CDFG (if this is a new occurrence).
- A description of the anticipated impacts that the covered activity will have on the occurrence and/or how the project will avoid impacts to all covered and no-take plant species. All projects must demonstrate avoidance of all six no-take plants (see table 6-5 of the HCP/NCCP).

Rare Plant Surveys

Rare plant surveys of the project parcel, laydown and stockpile areas were conducted by botanist Virginia Dains and CH2M HILL biologist Michael Clary on March 25, 2009. Rare plant surveys for the proposed transmission line alignment were conducted by CH2M HILL biologist Richard Crowe and Russell Huddleston on April 22, 2010. Additional surveys of the two ruderal soil stockpile areas were completed by Mr. Huddleston on October 22, 2010. The purpose of the field surveys was to look for and assess habitat suitability for special-status plant species as well as characterize habitats and land cover types. All native and naturalized plant species were identified to the taxonomic level to determine their conservation status.

No special-status plants were observed during any of the botanical surveys. Given the existing high levels of disturbance and the lack of natural habitats associated with the project areas, including the transmission line right-of-way, the potential for special-status plant species to occur is considered extremely low. The project site, laydown and stockpile areas include buildings and roads with horticultural plantings and other disturbed industrial areas characterized by ruderal vegetation. A constructed mitigation wetland is present in the southwest portion of the project parcel. Detailed results of the rare plant survey reports are provided in Attachment 4.

III. Species-Specific Monitoring and Avoidance Requirements

This section discusses subsequent actions that are necessary to ensure project compliance with Plan requirements. Survey requirements and Best Management Practices pertaining to selected covered wildlife species are detailed in Section 6.4.3, *Species-Level Measures*, beginning on page 6-36 of the Final HCP/NCCP.

Preconstruction Surveys for Selected Covered Wildlife

If habitat for selected covered wildlife species identified in Table 2a was found to be present in the project area. In Table 3, identify the species for which preconstruction surveys or notifications are required based on the results of the planning surveys. Identify whether a condition of approval has been inserted into the development contract to address this requirement.

Table 3

Applicable Preconstruction Survey and Notification Requirements based on Land Cover Types and Habitat Elements Identified in Table 2a

Species	Preconstruction Survey and Notification Requirements
<input type="checkbox"/> None	
<input checked="" type="checkbox"/> San Joaquin kit fox (p. 6-38)	Map all dens (>5 in. diameter) and determine status. Determine if breeding or denning foxes are in the project area. Provide written preconstruction survey results to FWS within 5 working days after surveying.
<input checked="" type="checkbox"/> Western burrowing owl (p. 6-40)	Map all burrows and determine status. Document use of habitat (e.g. breeding, foraging) in/near disturbance area (within 500 ft.)
<input checked="" type="checkbox"/> Giant garter snake (p. 6-44)	Delineate aquatic habitat up to 200 ft. from water's edge. Document any sightings of garter snake.
California tiger salamander (p. 6-46) (notification only)	Provide written notification to USFWS and CDFG regarding timing of construction and likelihood of occurrence in the project area.
<input checked="" type="checkbox"/> California red-legged frog (p. 6-47) (notification only)	Provide written notification to USFWS and CDFG regarding timing of construction and likelihood of occurrence in the project area.
<input type="checkbox"/> Covered shrimp species (p. 6-47)	Document and evaluate use of all habitat features (e.g., vernal pools, rock outcrops). Document occurrences of covered shrimp.
<input type="checkbox"/> Townsend's big-eared bat (p. 6-37)	Determine if site is occupied or shows signs of recent occupation (guano).
<input checked="" type="checkbox"/> Swainson's hawk (p. 6-42)	Determine whether nests are occupied.
<input checked="" type="checkbox"/> Golden eagle (p. 6-39)	Determine whether nests are occupied.
Note: Page numbers refer to the HCP/NCCP.	

Preconstruction Surveys as Required for Selected Covered Wildlife in Table 3

Describe the preconstruction survey's or notification conditions applicable to any species checked in Table 3. All preconstruction surveys shall be conducted in accordance with the requirements set forth in Section 6.4.3, *Species-Level Measures*, and Table 6-1 of the HCP/NCCP.

San Joaquin Kit Fox

Prior to any ground disturbance related to covered activities, a USFWS/CDFG–approved biologist will conduct a preconstruction survey in areas identified in the planning surveys as supporting suitable breeding or denning habitat for San Joaquin kit fox. The surveys will establish the presence or absence of San Joaquin kit foxes and/or suitable dens and evaluate use by kit foxes in accordance with USFWS survey guidelines (U.S. Fish and Wildlife Service 1999).

Preconstruction surveys will be conducted within 30 days of ground disturbance. On the parcel where the activity is proposed, the biologist will survey the proposed disturbance footprint and a 250-foot radius from the perimeter of the proposed footprint to identify San Joaquin kit foxes and/or suitable dens. Adjacent parcels under different land ownership will not be surveyed. The status of all dens will be determined and mapped. Written results of preconstruction surveys will be submitted to USFWS within 5 working days after survey completion and before the start of ground disturbance. Concurrence is not required prior to initiation of covered activities.

If San Joaquin kit foxes and/or suitable dens are identified in the survey area, the measures described in the following section (Construction Monitoring and Avoidance) will be implemented.

Western Burrowing Owl

Prior to any ground disturbance related to covered activities, a USFWS/CDFG approved biologist will conduct a preconstruction survey in areas identified in the planning surveys as having potential burrowing owl habitat. The surveys will establish the presence or absence of western burrowing owl and/or habitat features and evaluate use by owls in accordance with CDFG survey guidelines (California Department of Fish and Game 1993).

On the parcel where the activity is proposed, the biologist will survey the proposed disturbance footprint and a 500-foot radius from the perimeter of the proposed footprint to identify burrows and owls. Adjacent parcels under different land ownership will not be surveyed. Surveys should take place near sunrise or sunset in accordance with CDFG guidelines. All burrows or burrowing owls will be identified and mapped. Surveys will take place no more than 30 days prior to construction. During the breeding season (February 1 through August 31), surveys will document whether burrowing owls are nesting in or directly adjacent to disturbance areas. During the non-breeding season (September 1 through January 31), surveys will document whether burrowing owls are using habitat in or directly adjacent to any disturbance area. Survey results will be valid only for the season (breeding or non-breeding) during which the survey is conducted.

Giant Garter Snake

Prior to any ground disturbance related to covered activities, a USFWS/CDFG–approved biologist will conduct a preconstruction survey in areas identified in the planning surveys as having suitable garter snake habitat and 200 feet of adjacent uplands, measured from the outer edge of each bank. The surveys will delineate suitable habitat and document any sightings of giant garter snake.

California Red-legged Frog (CRLF)

No preconstruction surveys are required.

Swainson's hawk

Prior to any ground disturbance related to covered activities that occurs during the nesting season (March 15 through September 15), a qualified biologist will conduct a preconstruction survey no more than 1 month prior to construction to establish whether Swainson's hawk nests within 1,000 feet of the project site are occupied. If potentially occupied nests within 1,000 feet are off the project site, then their occupancy will be determined by observation from public roads or by observations of Swainson's hawk activity (e.g., foraging) near the project site. If nests are occupied, the minimization measures and construction monitoring described in the following section are required (see Construction Monitoring and Avoidance).

Golden Eagle

Prior to implementation of covered activities, a qualified biologist will conduct a preconstruction survey to establish whether nests of golden eagles are occupied (see Section 6.3.1, *Planning Surveys*). If nests are occupied, the minimization measures and construction monitoring described in the following section are required (see Construction Monitoring and Avoidance).

Construction Monitoring & Avoidance and Minimization Measures for Selected Covered Species

If preconstruction surveys for key covered wildlife species establish the presence of any such species, construction monitoring will be necessary. In Table 4, check the boxes for the species that will be assessed during the preconstruction surveys (see Table 3). A summary of the construction monitoring requirements for each species is provided in Table 4 and these measures must be implemented in the event that preconstruction surveys described in Table 3 detect the covered species. A summary of avoidance measures is also provided in Table 4 and these measures must be implemented if construction monitoring detects the species or its sign. These construction monitoring and avoidance requirements are described in detail in Section 6.4.3, *Species-Level Measures, of the Final HCP/NCCP*.

Construction Monitoring Plan Requirements in Section 6.3.3, Construction Monitoring, of the Final HCP/NCCP:

- ☒ Before implementing a covered activity, the applicant will develop and submit a construction-monitoring plan to the Implementing Entity⁴ for approval.

Table 4
Applicable Construction Monitoring Requirements

Species Assessed by Preconstruction Surveys	Monitoring Action Required if Species Detected
<input type="checkbox"/> None	N/A
<input checked="" type="checkbox"/> San Joaquin kit fox (p. 6-38)	Establish exclusion zones (>50 ft) for potential dens. Establish exclusion zones (>100 ft) for known dens. Notify USFWS of occupied natal dens.
<input checked="" type="checkbox"/> Western burrowing owl (p. 6-40)	Establish buffer zones (250 ft) around nests. Establish buffer zones (160 ft) around burrows.

⁴ The East Contra Costa County Habitat Conservancy and the local land use Jurisdiction must review and approve the plan **prior** to the commencement of all covered activities (i.e. construction).

Table 4
Applicable Construction Monitoring Requirements

Species Assessed by Preconstruction Surveys	Monitoring Action Required if Species Detected
<input checked="" type="checkbox"/> Giant garter snake (p. 6-44)	Delineate 200-ft buffer around potential habitat. Provide field report on monitoring efforts. Stop construction activities if snake is encountered; allow snake to passively relocate. Remove temporary fill or debris from construction site. Mandatory training for construction personnel.
<input type="checkbox"/> Covered shrimp species (p. 6-47)	Establish buffer around outer edge of all hydric vegetation associated with habitat (50 feet of limit of immediate watershed supporting the wetland, whichever is larger). Mandatory training for construction personnel.
<input checked="" type="checkbox"/> Swainson's hawk (p. 6-42)	Establish 1,000-ft buffer around active nest and monitor compliance.
<input checked="" type="checkbox"/> Golden eagle (p. 6-39)	Establish 0.5-mile buffer around active nest and monitor compliance.

Construction Monitoring & Avoidance and Minimization Measures as Required for Selected Covered Wildlife in Table 4

Describe the construction monitoring and avoidance and minimization measures applicable to any species checked in Table 4. **A summary of avoidance measures is provided in Table 4, these measures must be implemented if construction monitoring detects the presence of the species. The construction monitoring & avoidance and minimization measures requirements are described in detail in Section 6.4.3, Species-Level Measures, of the HCP/NCCP.**

Biological Resources Mitigation Implementation and Monitoring Plan

A Biological Resources Mitigation Implementation and Monitoring Plan (BRMIMP) will be prepared at least 60 days prior to construction that outlines how the project would implement the mitigation and protection measures developed specifically for the project through participation in the HCP/NCCP. The mitigation and protection measures will be developed through consultation and discussions with the California Energy Commission (CEC), HCP/NCCP, USFWS, and CDFG. All participating entities will be provided draft copies of the BRMIMP for review and comment prior to finalizing the BRMIMP document.

Worker Environmental Awareness Program

A site-specific Worker Environmental Awareness Program (WEAP), which is intended to educate construction workers and operators on the sensitive resources in the area and the measures that should be undertaken to avoid or minimize impacts to these resources, will be administered by the designated biologist as part of the mitigation plan. The WEAP will include an oral, video/PowerPoint, and/or written materials presentation that discusses the types of construction activities that may impact biological resources and the measures developed to avoid such impacts. The WEAP will also include appropriate contact information and procedures. The program will include information regarding encounters with wildlife and dealing with situations involving biological resources.

Special-Status Species

With regard to special-status species, the following “Construction Monitoring & Avoidance and Minimization Measures” will be implemented:

San Joaquin kit fox:

- If a San Joaquin kit fox den is discovered in the proposed development footprint, the den will be monitored for 3 days by a USFWS/CDFG– approved biologist using a tracking medium or an infrared beam camera to determine if the den is currently being used.
- Unoccupied dens should be destroyed immediately to prevent subsequent use.
- If a natal or pupping den is found, USFWS and CDFG will be notified immediately. The den will not be destroyed until the pups and adults have vacated and then only after further consultation with USFWS and CDFG.
- If kit fox activity is observed at the den during the initial monitoring period, the den will be monitored for an additional 5 consecutive days from the time of the first observation to allow any resident animals to move to another den while den use is actively discouraged. For dens other than natal or pupping dens, use of the den can be discouraged by partially plugging the entrance with soil such that any resident animal can easily escape. Once the den is determined to be unoccupied it may be excavated under the direction of the biologist. Alternatively, if the animal is still present after 5 or more consecutive days of plugging and monitoring, the den may have to be excavated when, in the judgment of a biologist, it is temporarily vacant (i.e., during the animal's normal foraging activities).

If dens are identified in the survey area outside the proposed disturbance footprint, exclusion zones around each den entrance or cluster of entrances will be demarcated. The configuration of exclusion zones should be circular, with a radius measured outward from the den entrance(s). No covered activities will occur within the exclusion zones. Exclusion zone radii for potential dens will be at least 50 feet and will be demarcated with four to five flagged stakes. Exclusion zone radii for known dens will be at least 100 feet and will be demarcated with staking and flagging that encircles each den or cluster of dens but does not prevent access to the den by kit fox.

Western burrowing owl:

If burrowing owls are found during the breeding season (February 1–August 31), the project proponent will avoid all nest sites that could be disturbed by project construction during the remainder of the breeding season or while the nest is occupied by adults or young. Avoidance will include establishment of a nondisturbance buffer zone (described below). Construction may occur during the breeding season if a qualified biologist monitors the nest and determines that the birds have not begun egg-laying and incubation or that the juveniles from the occupied burrows have fledged. During the nonbreeding season (September 1–January 31), the project proponent should avoid the owls and the burrows they are using, if possible. Avoidance will include the establishment of a buffer zone (described below).

If occupied burrows for burrowing owls are not avoided, passive relocation will be implemented. Owls should be excluded from burrows in the immediate impact zone and within a 160-foot buffer zone by installing one-way doors in burrow entrances. These doors should be in place for 48 hours prior to excavation. The project area should be monitored daily for 1 week to confirm that the owl has abandoned the burrow. Whenever possible, burrows should be excavated using hand tools and refilled to prevent reoccupation (California Department of Fish and Game 1995). Plastic tubing or a similar structure should be inserted in the tunnels during excavation to maintain an escape route for any owls inside the burrow.

Giant Garter Snake:

To the maximum extent practicable, impacts on giant garter snake habitat as a result of covered activities will be avoided. If feasible, in areas near construction activities, a buffer of 200 feet from suitable habitat will be delineated within which vegetation disturbance or use of heavy equipment is prohibited. If impacts on giant garter snake habitat as a result of covered activities are not

avoided, the following measures will be implemented. These measures are based on USFWS's *Standard Avoidance and Minimization Measures during Construction Activities in Giant Garter Snake Habitat* (U.S. Fish and Wildlife Service 1999).

- Limit construction activity that disturbs habitat to the period between May 1 and September 30. This is the active period for giant garter snake, and direct mortality is minimized because snakes are more likely to independently move away from disturbed area. If activities are necessary in giant garter snake habitat between October 1 and April 30, the USFWS Sacramento Field Office will be contacted to determine if additional measures beyond those described below are necessary to minimize and avoid take.
- In areas where construction is to take place, dewater all irrigation ditches, canals or other aquatic habitat between April 15 and September 30 to remove habitat of garter snakes. Dewatered areas must remain dry, with no puddle water remaining, for at least 15 consecutive days prior to the excavation or filling of that habitat. If a site cannot be completely dewatered, netting and salvage of prey items may be necessary.

If suitable habitat for giant garter snake cannot be avoided between October 1 and April 30 the USFWS Sacramento Field Office will be contacted to determine if additional measures beyond those described below are necessary, and the following actions will be performed. A USFWS-approved biologist will conduct a construction survey no more than 24 hours before construction in suitable habitat and will be on site during construction activities in potential aquatic and upland habitat to ensure that individuals of giant garter snake encountered during construction will be avoided. The biologist will provide USFWS with a field report form documenting the monitoring efforts within 24 hours of commencement of construction activities. The monitor will be available thereafter. If a snake is encountered during construction activities, the monitor will have the authority to stop construction activities until appropriate corrective measures have been completed or it is determined that the snake will not be harmed. Giant garter snakes encountered during construction activities should be allowed to move away from the construction area on their own. Only personnel with a USFWS recovery permit pursuant to Section 10(a)(1)(A) of the ESA will have the authority to capture and/or relocate giant garter snakes that are encountered in the construction area. The project area will be reinspected whenever a lapse in construction activity of 2 weeks or more has occurred.

To ensure that construction equipment and personnel do not affect nearby aquatic habitat for giant garter snake outside construction areas, silt fencing will be erected to clearly define the aquatic habitat to be avoided; restrict working areas, spoils, and equipment storage and other project activities to areas outside of aquatic or wetland habitat; and maintain water quality and limit construction runoff into wetland areas through the use of fiber bales, filter fences, vegetation buffer strips, or other appropriate methods.

Fill or construction debris may be used by giant garter snakes as over-wintering sites. Therefore, upon completion of construction activities, any temporary fill or construction debris must be removed from the site.

Construction personnel will be trained to avoid harming giant garter snakes. A qualified biologist approved by USFWS will inform all construction personnel about the life history of giant garter snakes; the importance of irrigation canals, marshes/wetlands, and seasonally flooded areas such as rice fields to giant garter snakes; and the terms and conditions of the Plan related to avoiding and minimizing impacts on giant garter snake.

Swainson's hawk:

During the nesting season (March 15–September 15), covered activities within 1,000 feet of occupied nests or nests under construction will be prohibited to prevent nest abandonment. If site-specific conditions or the nature of the covered activity (e.g., steep topography, dense vegetation, limited activities) indicate that a smaller buffer could be used, the Implementing Entity will coordinate with CDFG/USFWS to determine the appropriate buffer size.

If young fledge prior to September 15, covered activities can proceed normally. If the active nest site is shielded from view and noise from the project site by other development, topography, or other features, the project applicant can apply to the Implementing Entity for a waiver of this avoidance measure. Any waiver must also be approved by USFWS and CDFG. While the nest is occupied, activities outside the buffer can take place. All active nest trees will be preserved on site, if feasible. Nest trees, including non-native trees, lost to covered activities will be mitigated by the project proponent according to the requirements below.

Mitigation for Loss of Nest Trees

The loss of non-riparian Swainson's hawk nest trees will be mitigated by the project proponent by:

- If feasible on-site, planting 15 saplings for every tree lost with the objective of having at least 5 mature trees established for every tree lost according to the requirements listed below.

AND either

1. Pay the Implementing Entity an additional fee to purchase, plant, maintain, and monitor 15 saplings on the HCP/NCCP Preserve System for every tree lost according to the requirements listed below, OR
2. The project proponent will plant, maintain, and monitor 15 saplings for every tree lost at a site to be approved by the Implementing Entity (e.g., within an HCP/NCCP Preserve or existing open space linked to HCP/NCCP preserves), according to the requirements listed below.

The following requirements will be met for all planting options:

- Tree survival shall be monitored at least annually for 5 years, then every other year until year 12. All trees lost during the first 5 years will be replaced. Success will be reached at the end of 12 years if at least 5 trees per tree lost survive without supplemental irrigation or protection from herbivory. Trees must also survive for at least three years without irrigation.
- Irrigation and fencing to protect from deer and other herbivores may be needed for the first several years to ensure maximum tree survival.
- Native trees suitable for this site should be planted. When site conditions permit, a variety of native trees will be planted for each tree lost to provide trees with different growth rates, maturation, and life span, and to provide a variety of tree canopy structures for Swainson's hawk. This variety will help to ensure that nest trees will be available in the short term (5-10 years for cottonwoods and willows) and in the long term (e.g., Valley oak, sycamore). This will also minimize the temporal loss of nest trees.
- Riparian woodland restoration conducted as a result of covered activities (i.e., loss of riparian woodland) can be used to offset the nest tree planting requirement above, if the nest trees are riparian species.
- Whenever feasible and when site conditions permit, trees should be planted in clumps together or with existing trees to provide larger areas of suitable nesting habitat and to create a natural buffer between nest trees and adjacent development (if plantings occur on the development site).
- Whenever feasible, plantings on the site should occur closest to suitable foraging habitat outside the UDA.
- Trees planted in the HCP/NCCP preserves or other approved offsite location will occur within the known range of Swainson's hawk in the inventory area and as close as possible to high-quality foraging habitat.

Golden Eagle:

Covered activities will be prohibited within 0.5 mile of active nests. Nests can be built and active at almost any time of the year, although mating and egg incubation occurs late January through August, with peak activity in March through July. If site-specific conditions or the nature of the covered activity (e.g., steep topography, dense vegetation, limited activities) indicate that a

smaller buffer could be appropriate or that a larger buffer should be implemented, the Implementing Entity will coordinate with CDFG/USFWS to determine the appropriate buffer size.

Construction monitoring will focus on ensuring that no covered activities occur within the buffer zone established around an active nest. Although no known golden eagle nest sites occur within or near the ULL, covered activities inside and outside of the Preserve System have the potential to disturb golden eagle nest sites. Construction monitoring will ensure that direct effects to golden eagles are minimized.

IV. Landscape and Natural Community-Level Avoidance and Minimization Measures

Describe relevant avoidance and minimization measures required to address the conservation measures listed below. If a conservation measure is not relevant to the project, explain why.

For All Projects

HCP/NCCP Conservation Measure 1.10. Maintain Hydrologic Conditions and Minimize Erosion

Briefly describe how the project complies with this measure. See page 6-21 of the Final HCP/NCCP for details.

Drainage Erosion and Sediment Control/Stormwater Pollution Prevention Plan

The OGS stormwater design will be governed by the stormwater management requirements of the Contra Costa Clean Water Program Stormwater C.3 Guidebook (CCCWP, 2008). The “C.3” stormwater regulations for new development currently apply to any development project which will create one acre or more of impervious area. The C.3 requirements address both flow control and treatment of stormwater. Per page 8 of the C.3 guidebook, using the Option 2 design process detailed in Chapter 4 will allow the OGS project to meet both treatment and flow control requirements.

A draft Construction Drainage, Erosion, and Sediment Control/ Stormwater Pollution Prevention Plan (DESCP/SWPPP) has been developed for the OGS project which incorporates the requirements of the C.3 guidebook. A final DESCP/SWPPP will be prepared prior to the start of construction and will be available for review upon request. The DESCP/SWPPP summarizes the proposed plans for maintaining the hydrologic conditions and minimizing erosion during construction. A copy of the draft DESCP/SWPPP is included as Attachment 5

The following discussion is a summary of the information provided in the draft DESCP/SWPPP as it applies to Conservation Measure 1.10.

Project Area

The project site is part of the former DuPont industrial facility but DuPont did not have any buildings, process equipment, or other facilities placed at the project site when the industrial facility was in operation. The plant site is currently a vineyard with a row of eucalyptus trees along the northeastern corner. Runoff at the OGS site currently drains to Wetland E, which is located on the northwest corner of the project site.

During the project, best mitigation practices will be used to minimize erosion. The following are examples of the sediment controls that will be used onsite during project construction:

- SE-1 Silt Fence
- SE-2 Sediment Basin
- SE-3 Sediment Trap
- SE-5 Fiber Rolls
- SE-6 Gravel Bag Berm
- SE-7 Street Sweeping and Vacuuming
- SE-8 Sandbag Barrier

- SE-9 Straw Bale Barrier
- SE-10 Storm Drain Inlet Protection
- SE-14 Biofilter Bags

A combination of silt fence and fiber rolls will be used around Wetland E to prevent the transmittal of soil particles in runoff flowing into them. Street sweeping and/or vacuuming will be implemented at the access roads entrances and exits. The proposed BMPs for the project area are presented in Figure 6.

Post-development drainage at the site will be designed to maintain the natural drainage pattern of the site. All stormwater will be contained onsite via a series of bioswales and a detention basin, eventually discharging into Wetland E. The volume provided within these areas is sufficient to store the combined 100-year and 10-year runoff volumes provided without discharging stormwater offsite. Water will either infiltrate directly into the ground, or will be routed into the detention basin which will provide stormwater treatment prior to discharge to the wetland. Given the high permeability of the Delhi Sand soils found in the project area, infiltration has been calculated to be fairly rapid. Four bioswales and a detention basin will be utilized to collect all stormwater runoff from the project site. The locations of bioswales, delineated drainage areas for each bioswale, and the detention basin are shown on Figure 7. Rainfall less than the design event will be contained in the bioswales and will infiltrate through the sandy soils or evaporate. The soils, plantings, and irrigation for the bioswales will be in accordance with Appendix B of the Contra Costa Clean Water Program Stormwater C.3 Guidebook. Bioswales 4 and 5 will provide additional treatment, particularly during construction, to limit sedimentation from construction activities reaching the wetland. Gravel check dams will be installed within the bioswales to limit erosion and transport of soil mix within the bioswales during higher flow rates. In order to maintain hydration of the wetland area, the detention pond has been designed with low-flow orifices which will release water into the pond within a 24-hour time period when water would be stored in the pond.

Runoff from the power block area will be routed through an oil/water separator before being discharged to the sanitary sewer system and will not be discharged onsite. Appendix E of the draft DESCP/SWPPP contains the Preliminary Stormwater Management Design for the project, which includes stormwater calculations and the pre- and post-development drainage plans.

Construction Laydown Area

Much of the construction laydown area is covered by bare soil with little vegetation; however, the northeastern portion is covered by existing asphalt. Stormwater flows across the asphalt, downward toward the north end of the pavement area and drains into an old asphalt swale that was part of the original Dupont stormwater system. Stormwater collects in the swale and basically pools, as the old stormwater system is maintained. The bare soil portion of the site is roughly divided in half by existing Eucalyptus trees. The topography is varied, but is relatively flat. Currently stormwater infiltrates into the bare ground.

The construction laydown area will be graded with the exception of the existing paved area. The area will be graded such that runoff from the non-asphalt area is collected in a bioswale. Excess water from the construction laydown bioswale will not be pumped offsite as previously indicated in Section 5.15.1.6 of the AFC, but instead will be allowed to pond in the bioswale and percolate. The proposed BMPs for the construction laydown and parking area are presented in Figure 6.

Soil Stockpile Area

During construction, a combination of silt fence and fiber rolls will be used on the upslope sides of wetlands D and F to prevent soil particles from flowing into them. Fiber rolls will also be placed around the perimeter of stockpile 1 (located on a concrete parking area) to prevent sediment transport from the stockpile area. Additional BMPs such as Gravel Bag Berms, Sand Bag Barriers

or Straw Bale Barriers may also be used in these areas for reinforcement. Street sweeping and/or vacuuming will be implemented at the access roads entrances and exits. The proposed BMPs for the soil stockpile areas are presented in Figure 8.

The temporary soil stockpile 1 area will not be impacted (graded) during construction activities. Therefore, the pre-construction drainage will be maintained following construction. Stockpiles 2 and 3 will be vegetated following construction and will be maintained over time during build-out of the DuPont Oakley Specific Plan. Post-construction drainage will be in the form of infiltration into the stockpiles, using applicable BMPs for erosion and sediment control.

Transmission Line Construction Areas

Following installment of the new pole towers and removal of the old towers, the land surface will be regraded and revegetated to pre-construction conditions. A summary of the re-vegetation plan and proposed BMPs for each tower site are included in Attachment 2.

Transmission Line Pull and Tensioning Areas

Following installment of the new pole towers and removal of the old towers, the land surface will be regraded and revegetated to pre-construction conditions. BMPs for the transmission line pull and tensioning areas will be similar to the transmission line construction areas above.

Sanitary Sewer Force Main Areas

Drainage patterns would not change due to installation of the force main; and BMPs would protect against extra runoff and sediment due to construction activities. Following construction, both roads and their respective ROWs would be returned to pre-construction conditions.

HCP/NCCP Conservation Measure 1.11. Avoid Direct Impacts on Extremely Rare Plants, Fully Protected Wildlife Species, or Covered Migratory Birds

Briefly describe how the project complies with this measure. See page 6-23 of the Final HCP/NCCP for details.

Extremely Rare Plants

Extremely rare plants have not been identified on the project parcel or along the transmission line ROW.

Fully Protected Wildlife Species

The white-tailed kite and golden eagle are listed in the HCP as “no take species,” and no direct take of individuals is allowed (HCP Table 6-5). MBTA species could breed in a variety of habitats, including grasslands, cultivated fields, oak woodlands, and suburban areas where prey is abundant. Preconstruction surveys for white-tailed kite and golden eagle will be performed as part of preconstruction surveys.

Migratory Birds

Breeding habitat for birds of prey protected by the CDFG Commission Code, Section 1600, and the federal MBTA occurs in the project area. These species include the white-tailed kite (*Elanus leucurus*) and red-tailed hawk (*Buteo jamaicensis*), which were observed during field visits; other migratory birds (passerines and raptors), including Swainson’s hawk and golden eagle, receive additional protection under the MBTA and Migratory Bird Treaty Reform Act (USFWS, 2005). All birds covered by the HCP are also considered migratory birds and are subject to the prohibitions of the MBTA (see HCP Conservation Measure 1.11:pg 6-23). Red-tailed hawk is not covered by the HCP but is covered by the MBTA. Actions conducted under the HCP must comply with the

provisions of the MBTA and avoid killing or possessing covered migratory birds, their young, nests, feathers, or eggs (see HCP Conservation Measure 1.11: pg 6-23). To fulfill the requirements of the MBTA, covered activities must not result in take as defined by the MBTA of covered bird species.

Preconstruction surveys for MBTA species will be performed as part of preconstruction surveys for Swainson's hawk and golden eagle. If active nests are identified within 1,000 feet of the project parcel and transmission line ROW, a construction biological monitor will ensure that no covered activities occur within the buffer zone established around an active nest. Biological construction monitoring will ensure that direct effects to MBTA species are minimized.

For Projects on or adjacent to Streams or Wetlands

HCP/NCCP Conservation Measure 1.7. Establish Stream Setbacks

Briefly describe how the project complies with this measure. See page 6-15 and Table 6-2 of the Final HCP/NCCP for details. For questions on the stream setback requirements, please contact the Conservancy.

Stream Setback—East Antioch Creek

The project would intersect GGS upland habitat at the intersection of the transmission line ROW and East Antioch Creek (see Figure 3j, Land Cover Habitat Survey), with the replacement of an existing steel-lattice tower with a tubular steel pole approximately 120 feet upslope from the creek bank. East Antioch Creek flows into Lake Alhambra and then into the San Joaquin River. Access to this area will be by an existing paved and earthen walking trail, which crosses the wetland via a culvert. The area will be protected with ESA signage and sediment control BMPs to ensure no disturbance occurs in this area during construction activities.

HCP/NCCP Conservation Measure 2.12. Wetland, Pond, and Stream Avoidance and Minimization

Briefly describe how the project complies with this measure. See page 6-33 of the Final HCP/NCCP for details.

Wetland E

A wetland preserve, called Wetland E, is located at the western end of the project parcel. This wetland is under conservation easement. The project would avoid this wetland, and the project has been designed so that it will not have any adverse effect on the functions and values of this wetland. A combination of silt fence and fiber rolls will be used around Wetland E to prevent the transmittal of soil particles from flowing into the wetland. In addition, the project will implement a wetland management plan that includes removal of existing refuse from the 0.6-acre wetland and surrounding 1.0-acre conservation area, removal of non-native species and planting of native species, and enhancements to drainage and stormwater control (Attachment 1).

Stream Setback—East Antioch Creek

See the response under Conservation Measure 1.7, above.

The project would not encounter any other streams, wetlands, or ponds.

For Projects adjacent to Protected Natural Lands (existing and projected)

Covered activities adjacent to permanently protected natural lands will require a variety of special considerations to address issues associated with characteristics of the urban-wildland interface. These considerations are intended to minimize the impacts of development on the integrity of habitat preserved and protected under the terms of the Plan. Permanently protected natural lands are defined as any of the following (see the latest Preserve System map on the Conservancy web site, www.cocohcp.org).

- Publicly owned open space with substantial natural land cover types including but not limited to state and regional parks and preserves and public watershed lands (local and urban neighborhood parks are excluded).
- Deed-restricted private conservation easements.
- HCP/NCCP Preserve System lands.
- Potential HCP/NCCP Preserve System lands (see Figure 5-3 in the HCP/NCCP).

HCP/NCCP Conservation Measure 1.6. Minimize Development Footprint Adjacent to Open Space

Briefly describe how the project complies with this measure. See page 6-14 of the Final HCP/NCCP for details.

Not Applicable. The project parcel, transmission line, and force main sewer line ROW are not adjacent to HCP/NCCP preserves, likely HCP/NCCP acquisition sites, or existing public open space that is or will be linked to HCP/NCCP preserve. Therefore, Conservation Measure 1.6 is not applicable for OGS.

HCP/NCCP Conservation Measure 1.8. Establish Fuel Management Buffer to Protect Preserves and Property

Briefly describe how the project complies with this measure. See page 6-18 of the Final HCP/NCCP for details.

Not Applicable. The project parcel, transmission line, and force main sewer line ROW are not adjacent to HCP/NCCP preserves, likely HCP/NCCP acquisition sites, or existing public open space that is or will be linked to HCP/NCCP preserve. Therefore, a fuel management buffer is not required for OGS.

HCP/NCCP Conservation Measure 1.9. Incorporate Urban-Wildland Interface Design Elements

Briefly describe how the project complies with this measure. See page 6-20 of the Final HCP/NCCP for details.

Not Applicable. The project parcel, transmission line and force main sewer line ROW are not adjacent to HCP/NCCP preserves, likely HCP/NCCP acquisition sites, or existing public open

space that is or will be linked to HCP/NCCP preserve. Therefore, incorporation of urban-wildland interface design elements are not required for OGS.

For Rural Infrastructure Projects

Rural infrastructure projects provide infrastructure that supports urban development within the urban development area. Such projects are divided into three categories: transportation projects, flood protection projects, and utility projects. Most rural road projects covered by the Plan will be led by Contra Costa County. All flood protection projects covered by the Plan will be led by the County Flood Control District. Utility projects will likely be led by the private companies that own the utility lines. A complete discussion of rural infrastructure projects is presented in Section 2.3.2 of the Final HCP/NCCP beginning on page 2-18.

HCP/NCCP Conservation Measure 1.12. Implement Best Management Practices for Rural Road Maintenance

Briefly describe how the project complies with this measure. See page 6-25 of the Final HCP/NCCP for details.

The applicant will not be maintaining rural roads as part of the project. Therefore, the Conservation Measure 1.12 is not applicable for OGS.

HCP/NCCP Conservation Measure 1.13. Implement Best Management Practices for Flood Control Facility Maintenance

Briefly describe how the project complies with this measure. See page 6-26 of the Final HCP/NCCP for details.

Not Applicable: The applicant will not be maintaining flood control facilities as part of the project. Therefore, the Conservation Measure 1.13 is not applicable for OGS.

HCP/NCCP Conservation Measure 1.14. Design Requirements for Covered Roads outside the Urban Development Area

Briefly describe how the project complies with this measure. See page 6-27 of the Final HCP/NCCP for details.

Not Applicable: The project site, laydown areas, stockpile areas, force main alignment, and approximately 0.8 miles of transmission line are within the initial urban development area. The remaining transmission line is outside the initial urban development area but does not create or impact rural roads. Therefore, the Conservation Measure 1.12 is not applicable for OGS.

V. Mitigation Measures

Complete and Attach Exhibit 1 (Permanent Impact Fees) and/or Exhibit 2 (Temporary Impact Fees) Fee Calculator(s) for Permanent and Temporary Impacts.

- Briefly describe the amount of fees to be paid and when.
- See Section 9.3.1 of the HCP/NCCP for details. If land is to be dedicated in lieu of fees or if restoration or creation of jurisdictional wetlands or waters is to be performed in lieu of fees, summarize these actions here and attach written evidence that the Conservancy has approved these actions in lieu of fees.

The permanent project mitigation fees total \$176,821 and the temporary mitigation fees total \$50,587 for a total project mitigation fee of \$227,408. The permanent and temporary fee calculation exhibits are included in Attachment 6. Contra Costa Generating Station, LLC proposes to remit the fees at the time construction begins, which is scheduled for June 2011.

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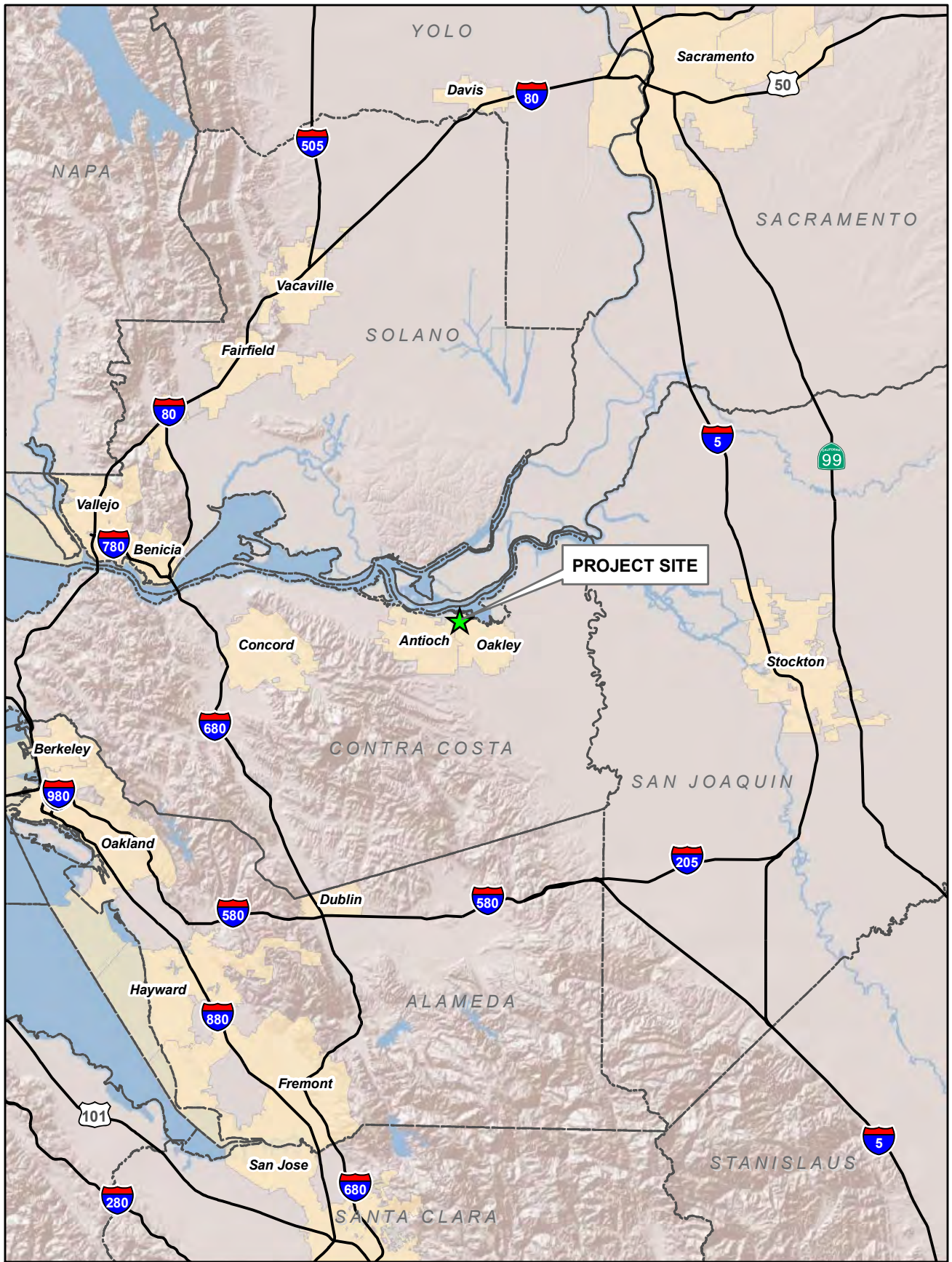
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Figures



LEGEND

★ PROJECT SITE

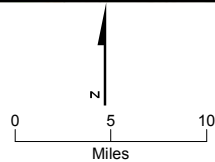


FIGURE 1

Project Vicinity

Oakley Generating Station
Oakley, California



This map was compiled from various scale source data and maps and is intended for use as only an approximate representation of actual locations.

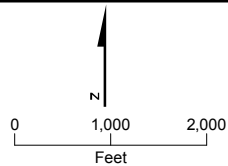
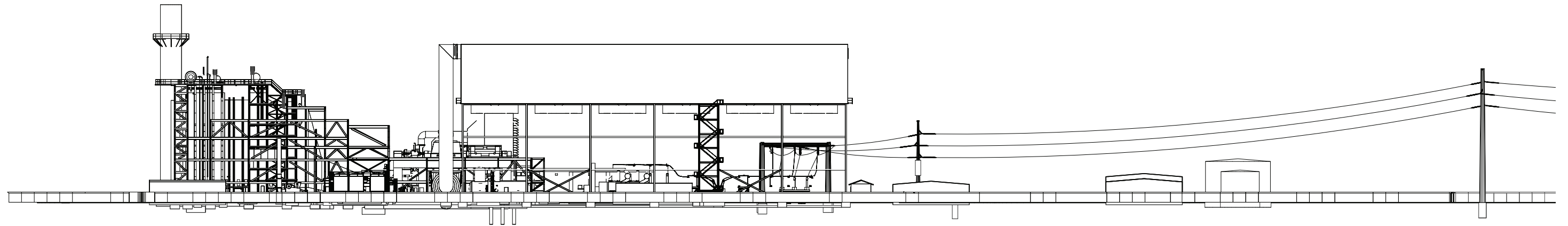


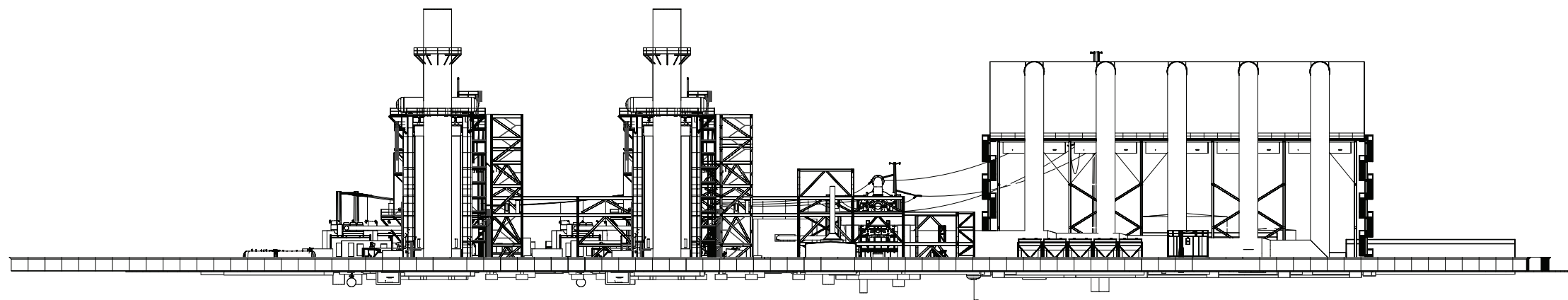
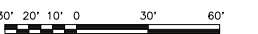
FIGURE 1b
PROJECT LOCATION
Oakley Generating Station
Oakley, California



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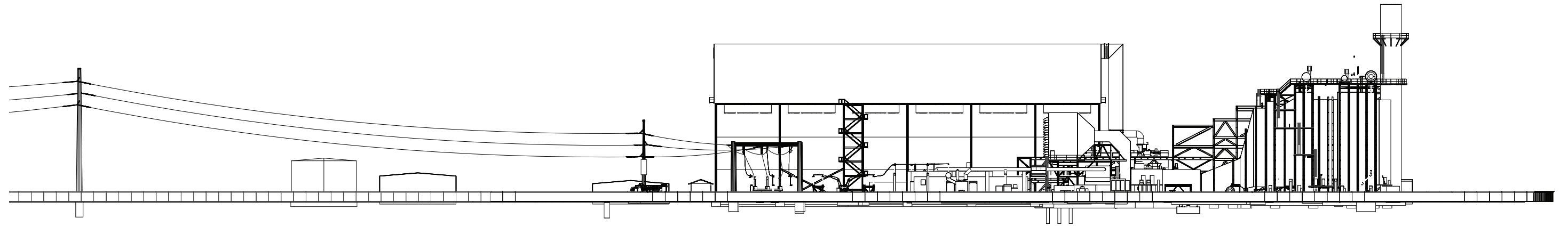


NORTH ELEVATION
LOOKING SOUTH

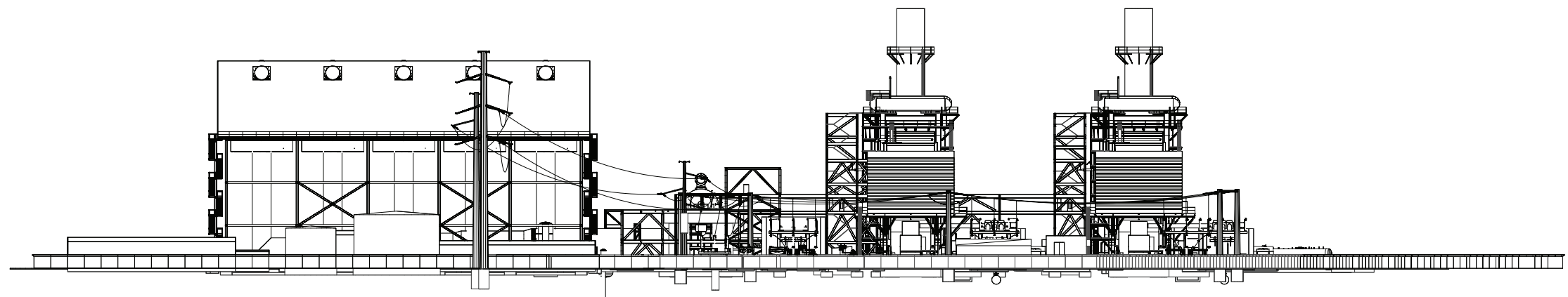
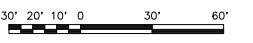


EAST ELEVATION
LOOKING WEST

FIGURE 2.2a
Plant Elevation
Oakley Generating Station
Oakley, California



SOUTH ELEVATION
LOOKING NORTH



WEST ELEVATION
LOOKING EAST

FIGURE 2.2b
Plant Elevation
Oakley Generating Station
Oakley, California



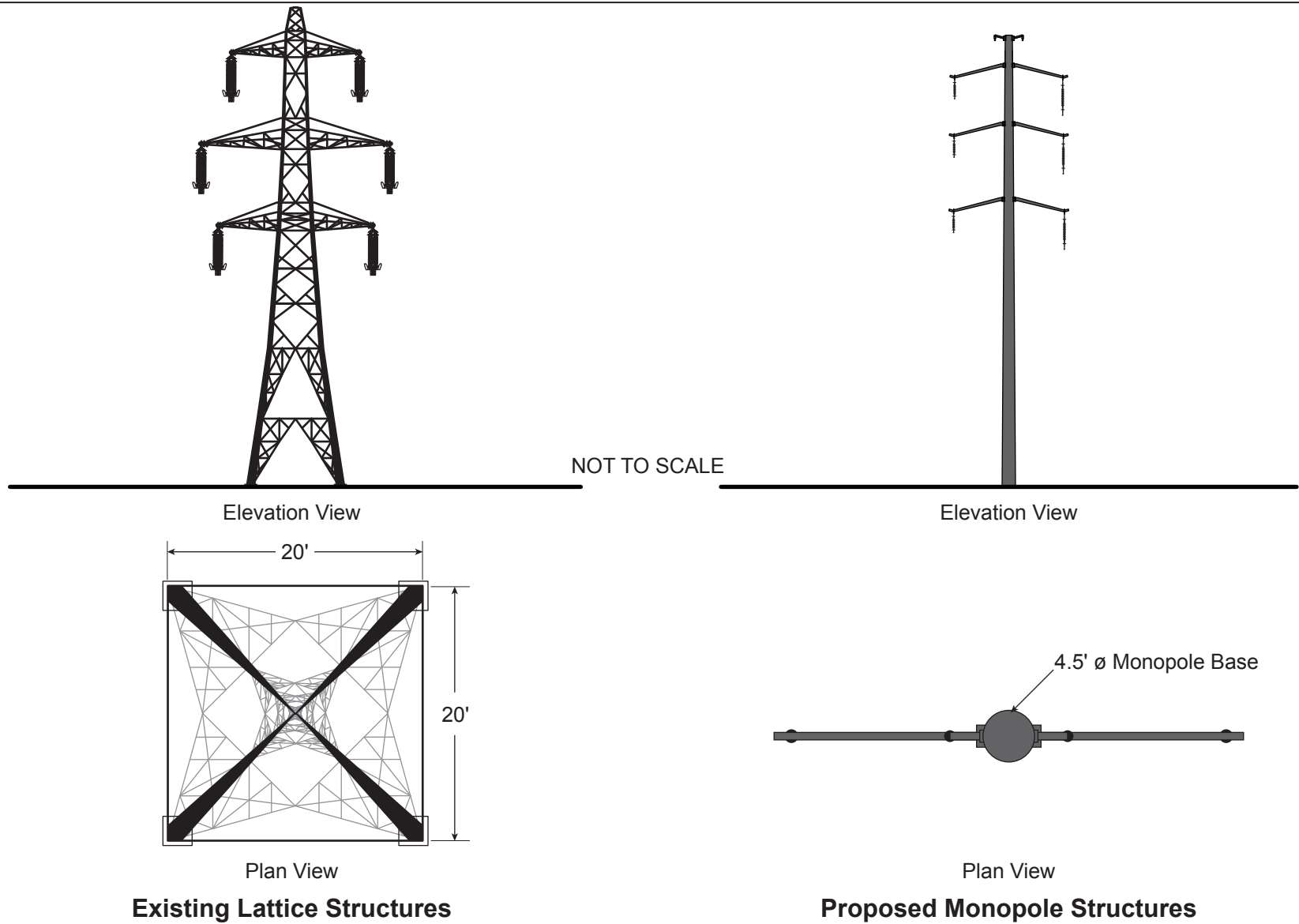
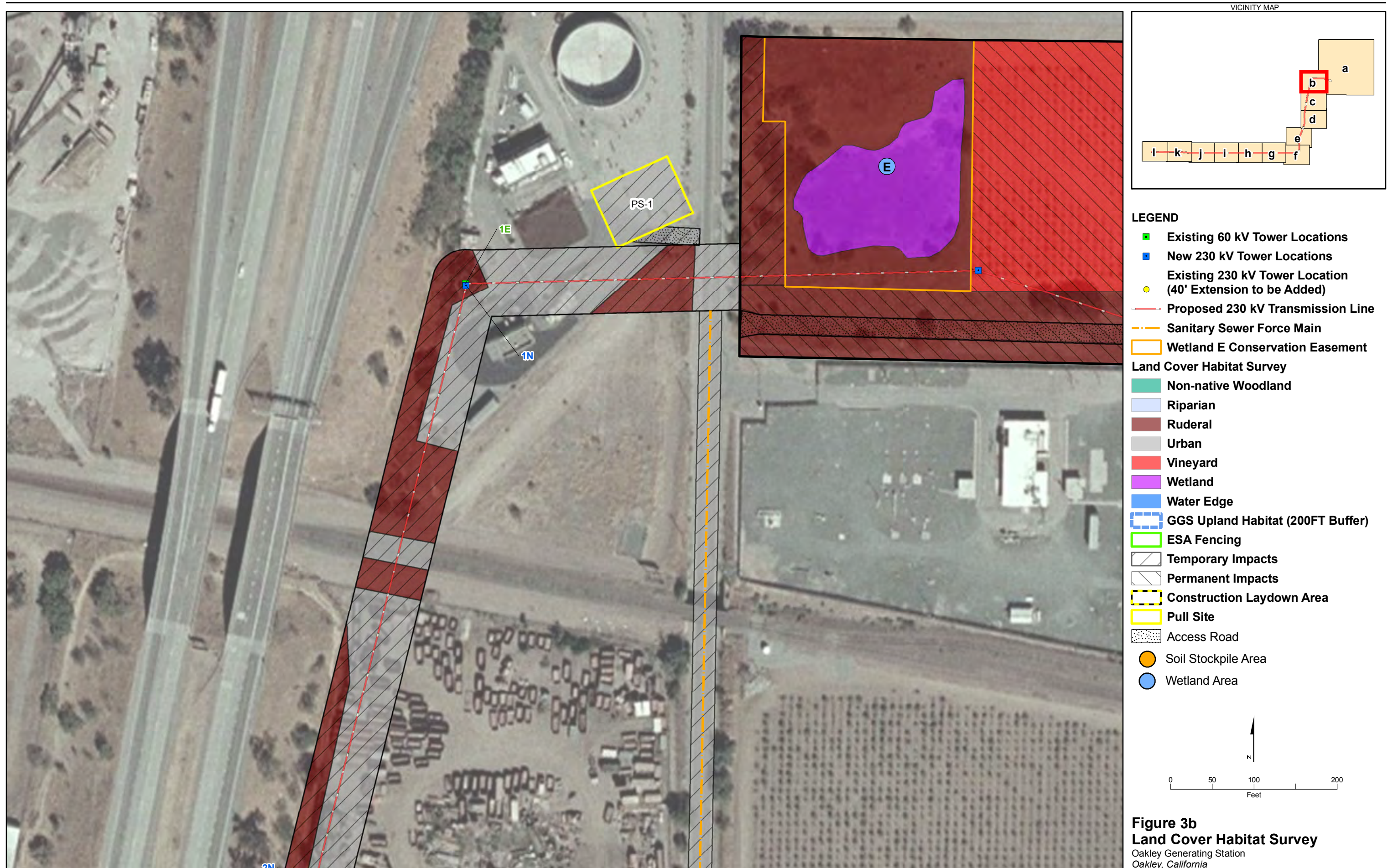
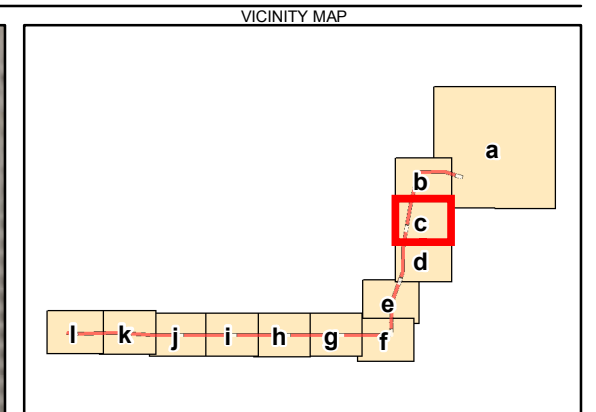
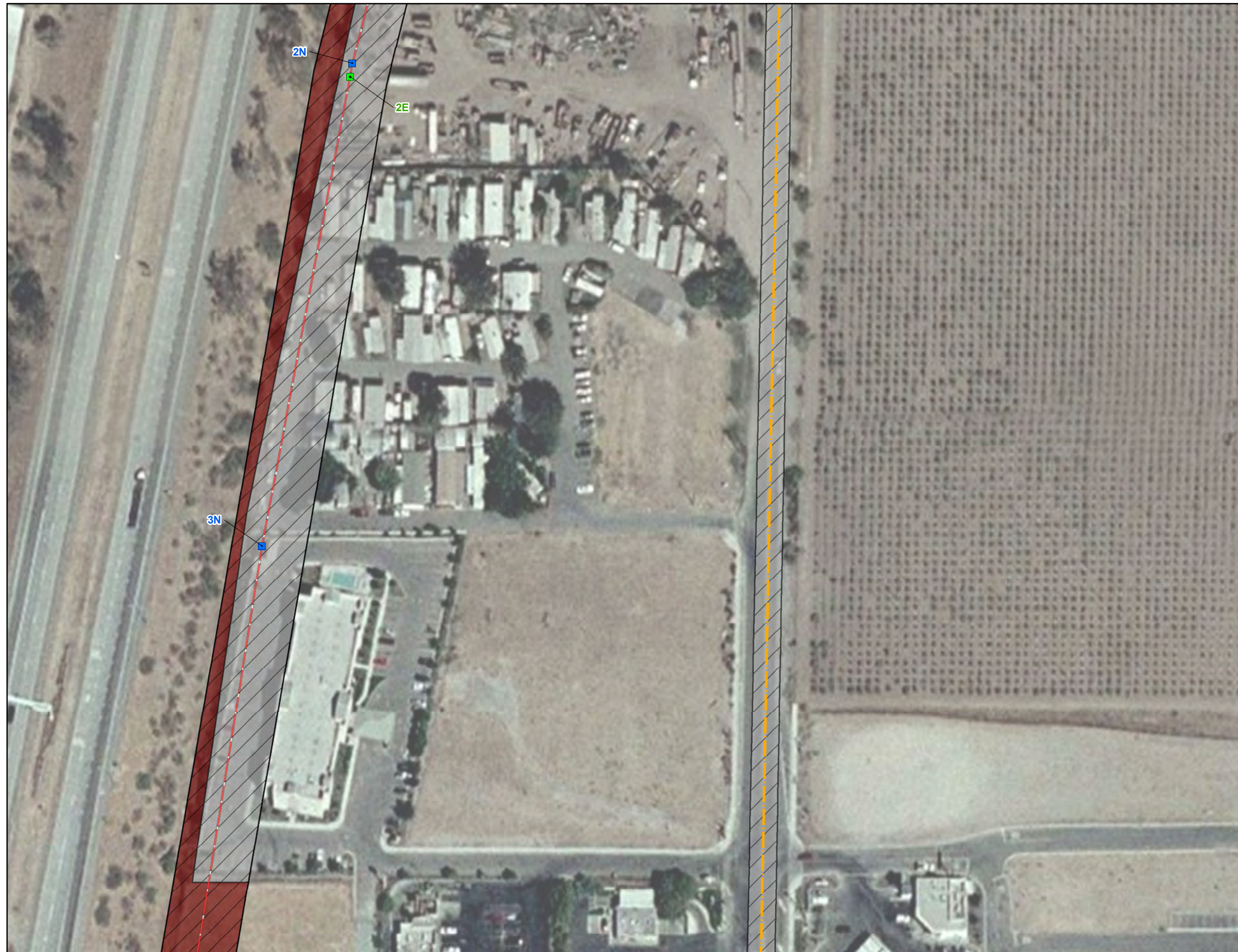


FIGURE 2-4
Diagram of Tower Footprint
 Oakley Generating Station DESCP/SWPPP
 Oakley, California







LEGEND

- Existing 60 kV Tower Locations
- New 230 kV Tower Locations
- Existing 230 kV Tower Location (40' Extension to be Added)
- Proposed 230 kV Transmission Line
- Sanitary Sewer Force Main
- Wetland E Conservation Easement
- Land Cover Habitat Survey
 - Non-native Woodland
 - Riparian
 - Ruderal
 - Urban
 - Vineyard
 - Wetland
 - Water Edge
 - GGG Upland Habitat (200FT Buffer)
 - ESA Fencing
 - Temporary Impacts
 - Permanent Impacts
 - Construction Laydown Area
 - Pull Site
 - Access Road
 - Soil Stockpile Area
 - Wetland Area

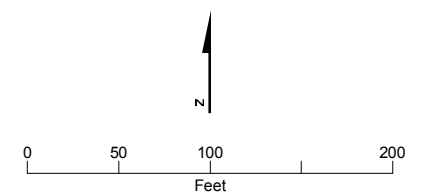
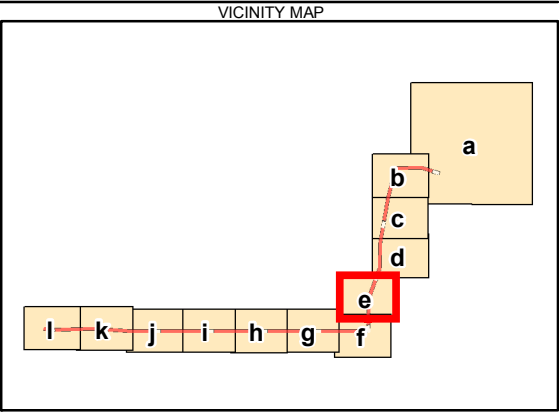
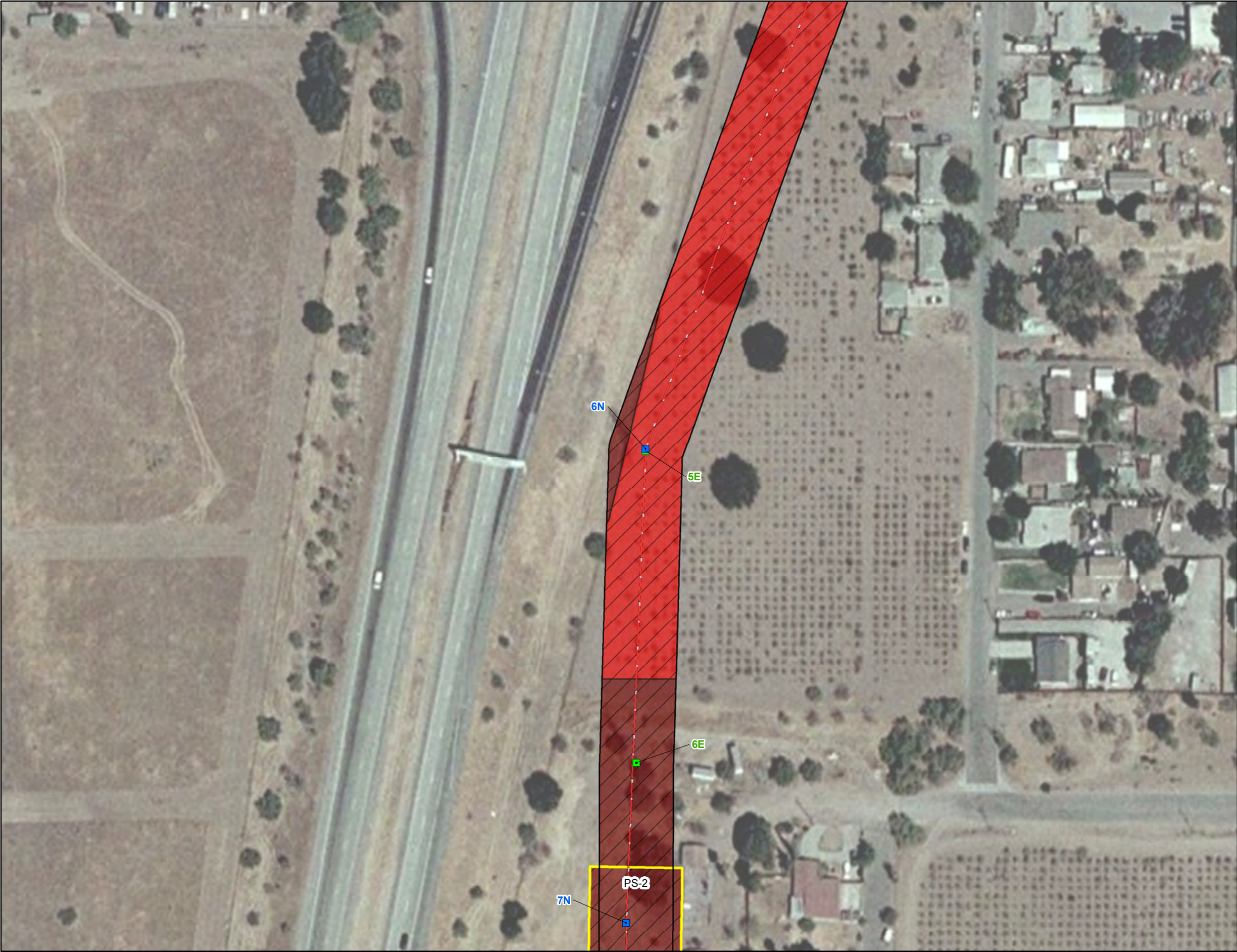


Figure 3c
Land Cover Habitat Survey
 Oakley Generating Station
 Oakley, California





- LEGEND**
- Existing 60 kV Tower Locations
 - New 230 kV Tower Locations
 - Existing 230 kV Tower Location (40' Extension to be Added)
 - Proposed 230 kV Transmission Line
 - Sanitary Sewer Force Main
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 - Land Cover Habitat Survey**
 - Non-native Woodland
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 - Temporary Impacts
 - Permanent Impacts
 - Construction Laydown Area
 - Pull Site
 - Access Road
 - Soil Stockpile Area
 - Wetland Area

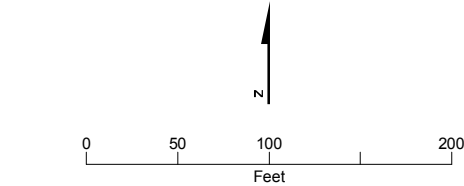
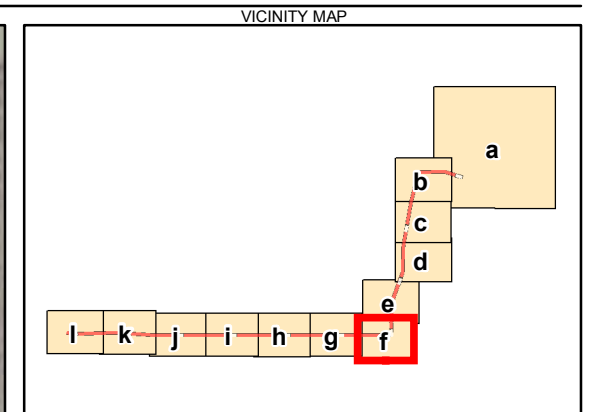


Figure 3e
Land Cover Habitat Survey
Oakley Generating Station
Oakley, California



LEGEND

- Existing 60 kV Tower Locations
- New 230 kV Tower Locations
- Existing 230 kV Tower Location (40' Extension to be Added)
- Proposed 230 kV Transmission Line
- Sanitary Sewer Force Main
- Wetland E Conservation Easement
- Land Cover Habitat Survey**
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- Temporary Impacts
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- Construction Laydown Area
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- Access Road
- Soil Stockpile Area
- Wetland Area

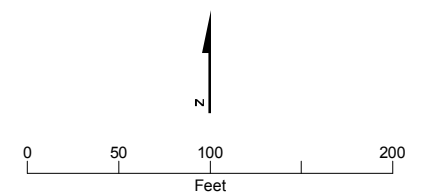
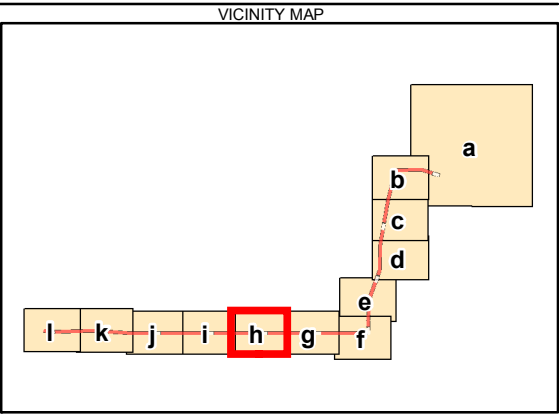
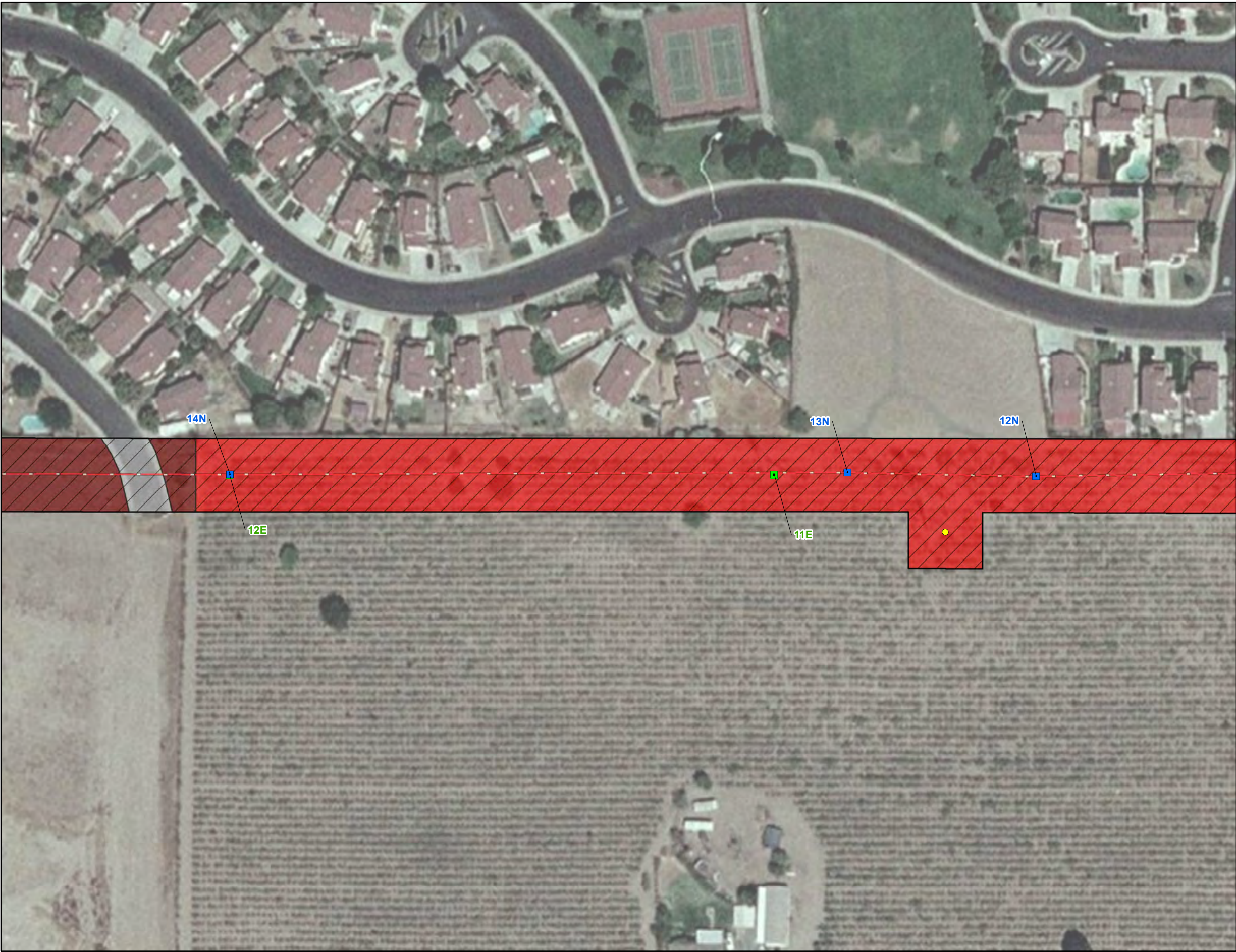


Figure 3f
Land Cover Habitat Survey
 Oakley Generating Station
 Oakley, California





- LEGEND**
- Existing 60 kV Tower Locations
 - New 230 kV Tower Locations
 - Existing 230 kV Tower Location (40' Extension to be Added)
 - Proposed 230 kV Transmission Line
 - Sanitary Sewer Force Main
 - Wetland E Conservation Easement
 - Land Cover Habitat Survey**
 - Non-native Woodland
 - Riparian
 - Ruderal
 - Urban
 - Vineyard
 - Wetland
 - Water Edge
 - GGs Upland Habitat (200FT Buffer)
 - ESA Fencing
 - Temporary Impacts
 - Permanent Impacts
 - Construction Laydown Area
 - Pull Site
 - Access Road
 - Soil Stockpile Area
 - Wetland Area

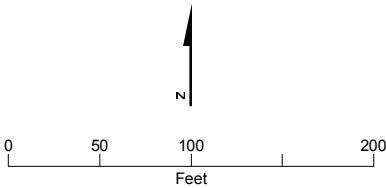
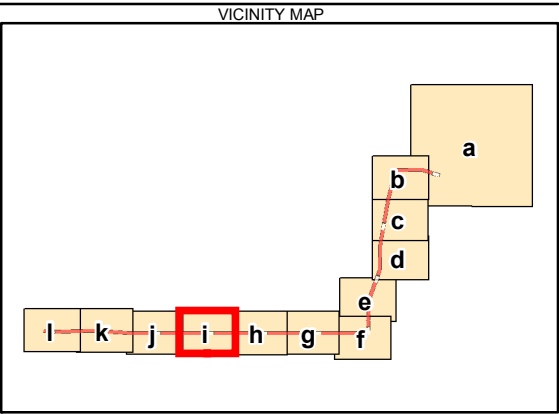


Figure 3h
Land Cover Habitat Survey
Oakley Generating Station
Oakley, California



- LEGEND**
- Existing 60 kV Tower Locations
 - New 230 kV Tower Locations
 - Existing 230 kV Tower Location (40' Extension to be Added)
 - Proposed 230 kV Transmission Line
 - Sanitary Sewer Force Main
 - Wetland E Conservation Easement
 - Land Cover Habitat Survey**
 - Non-native Woodland
 - Riparian
 - Ruderal
 - Urban
 - Vineyard
 - Wetland
 - Water Edge
 - GGS Upland Habitat (200FT Buffer)
 - ESA Fencing
 - Temporary Impacts
 - Permanent Impacts
 - Construction Laydown Area
 - Pull Site
 - Access Road
 - Soil Stockpile Area
 - Wetland Area

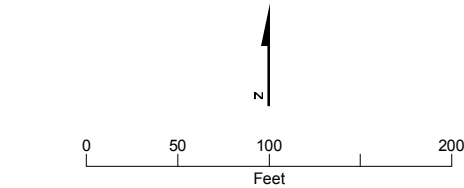
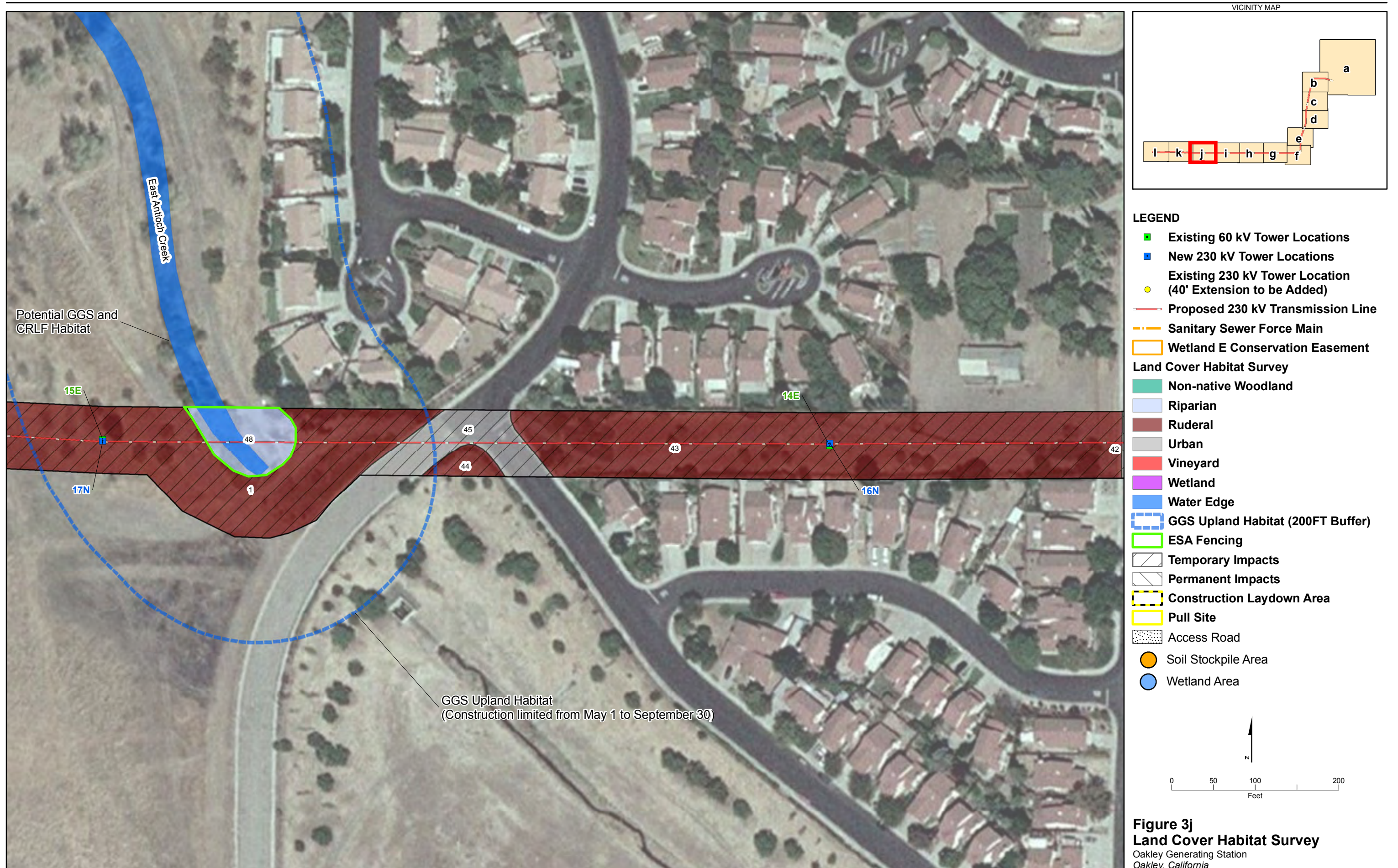
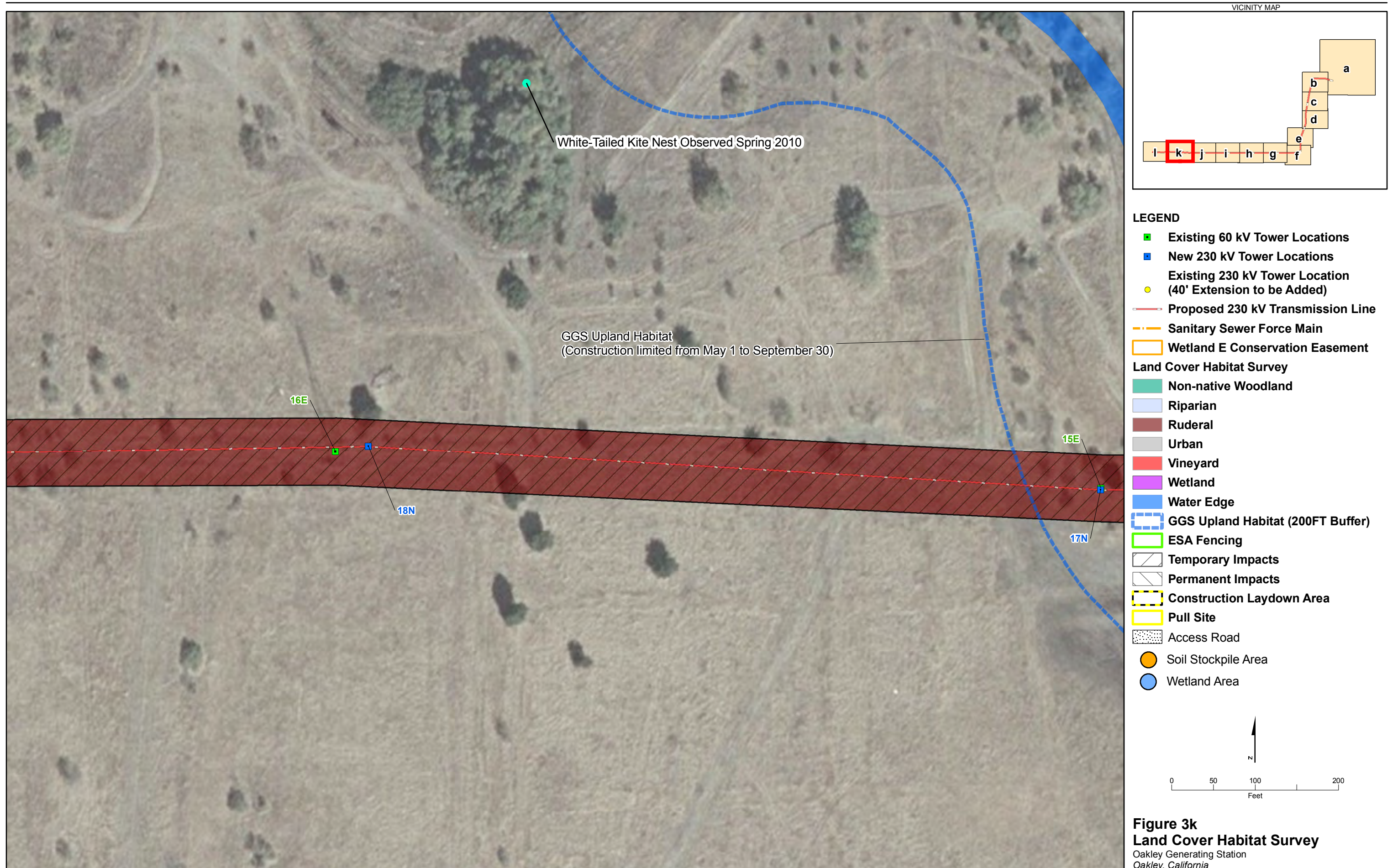
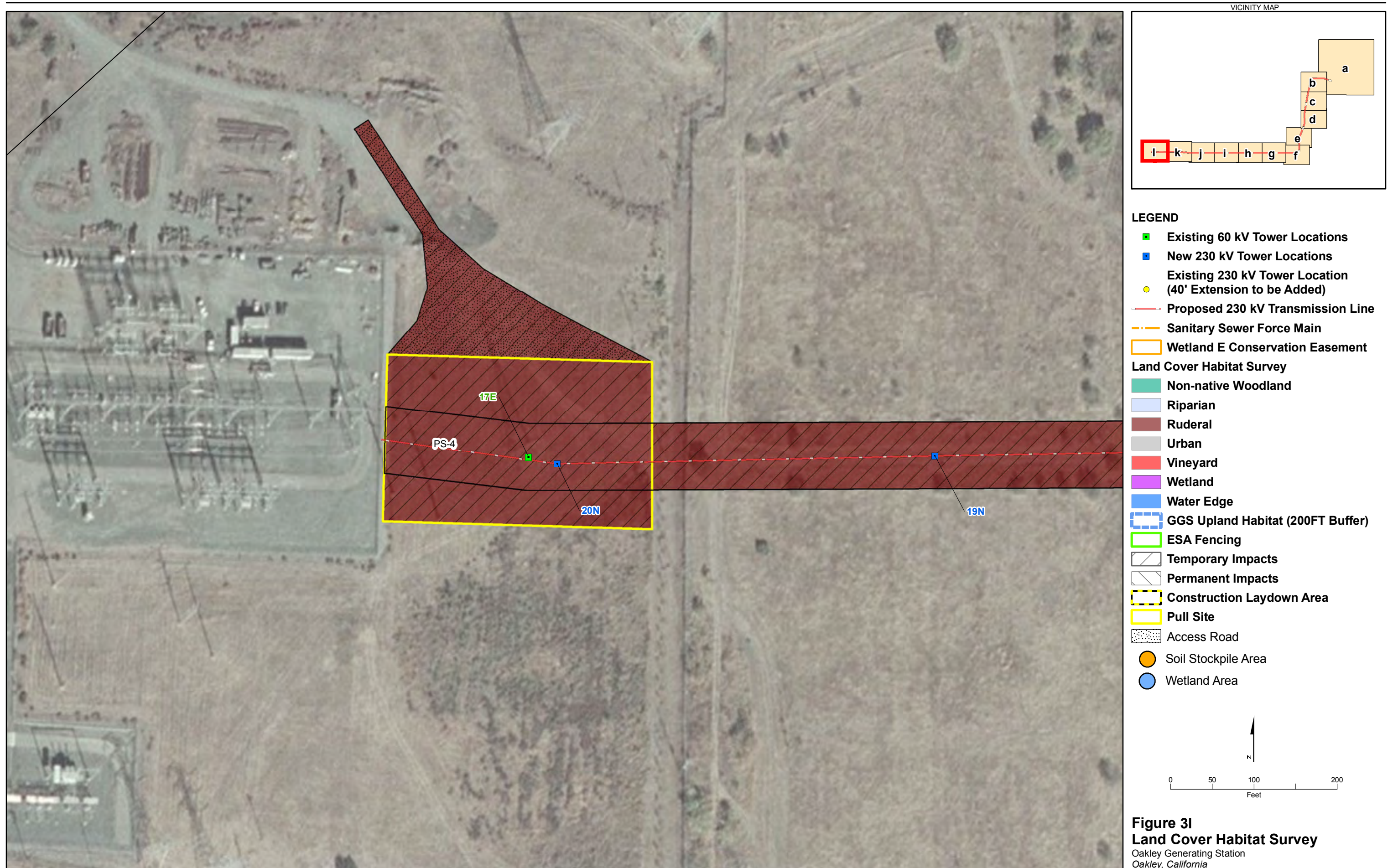
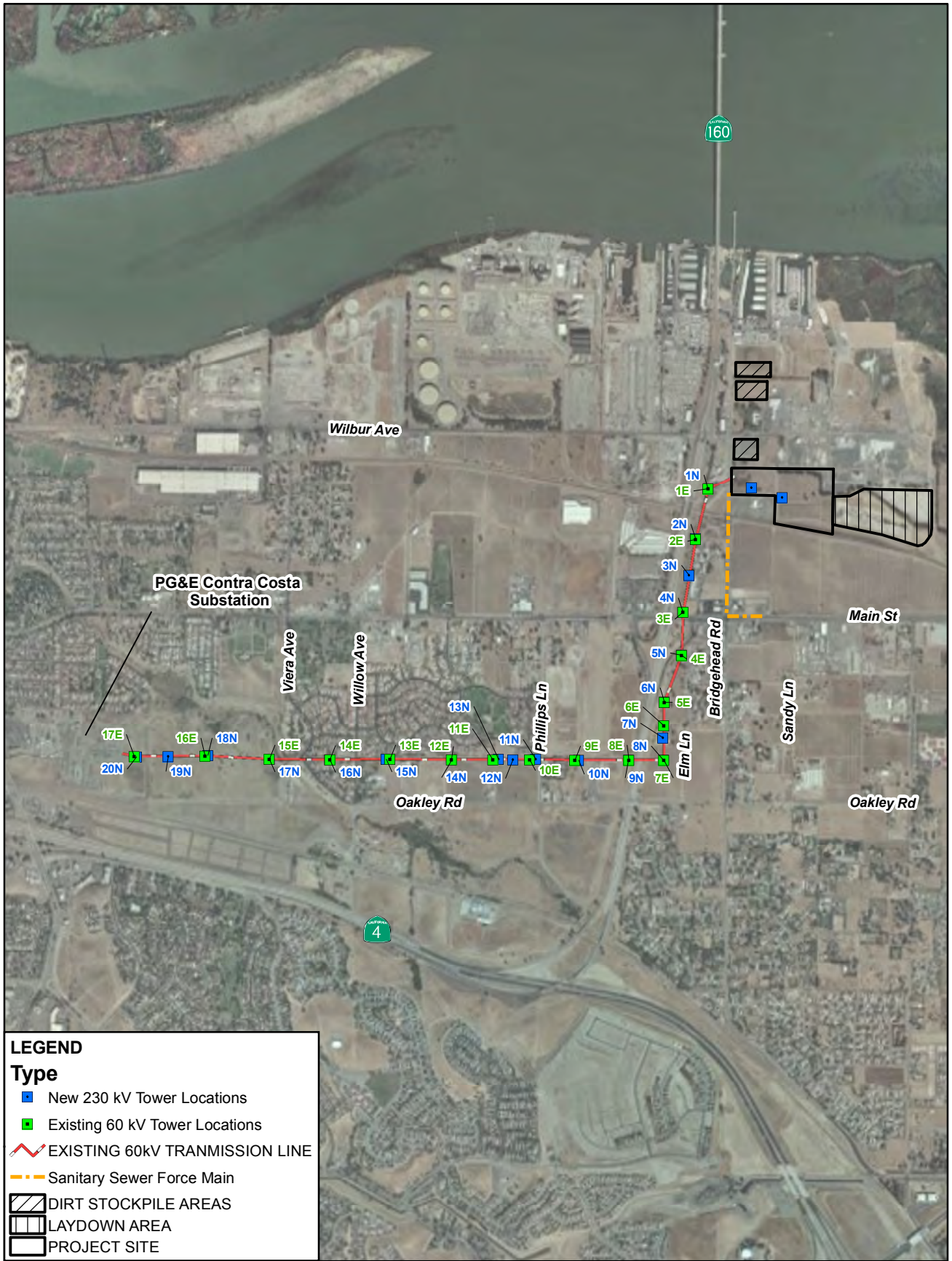


Figure 3i
Land Cover Habitat Survey
Oakley Generating Station
Oakley, California

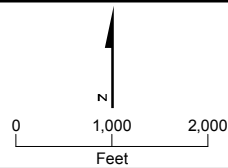






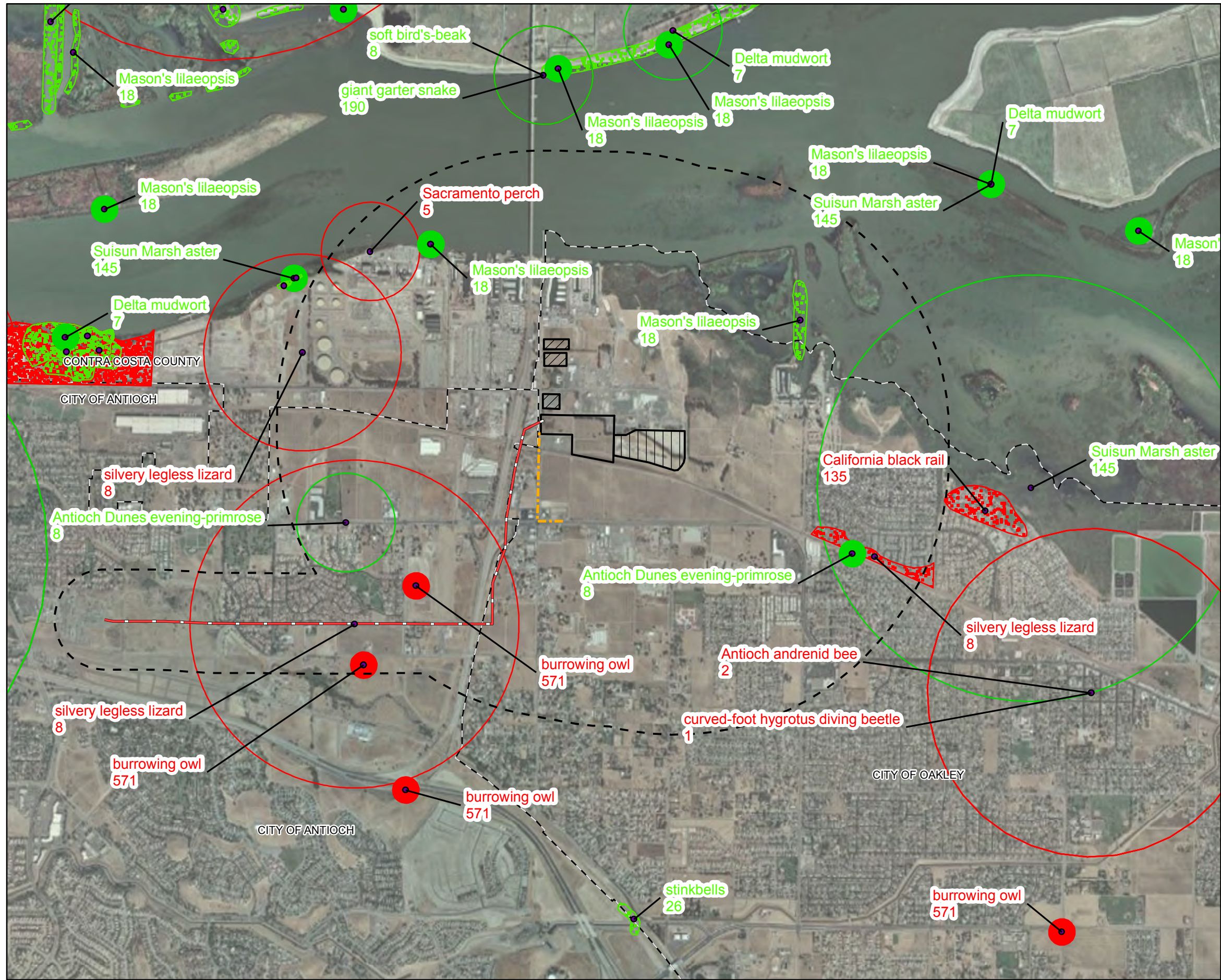


This map was compiled from various scale source data and maps and is intended for use as only an approximate representation of actual locations.



**FIGURE 4
TRANSMISSION TOWER
LOCATIONS**

Oakley Generating Station
Oakley, California





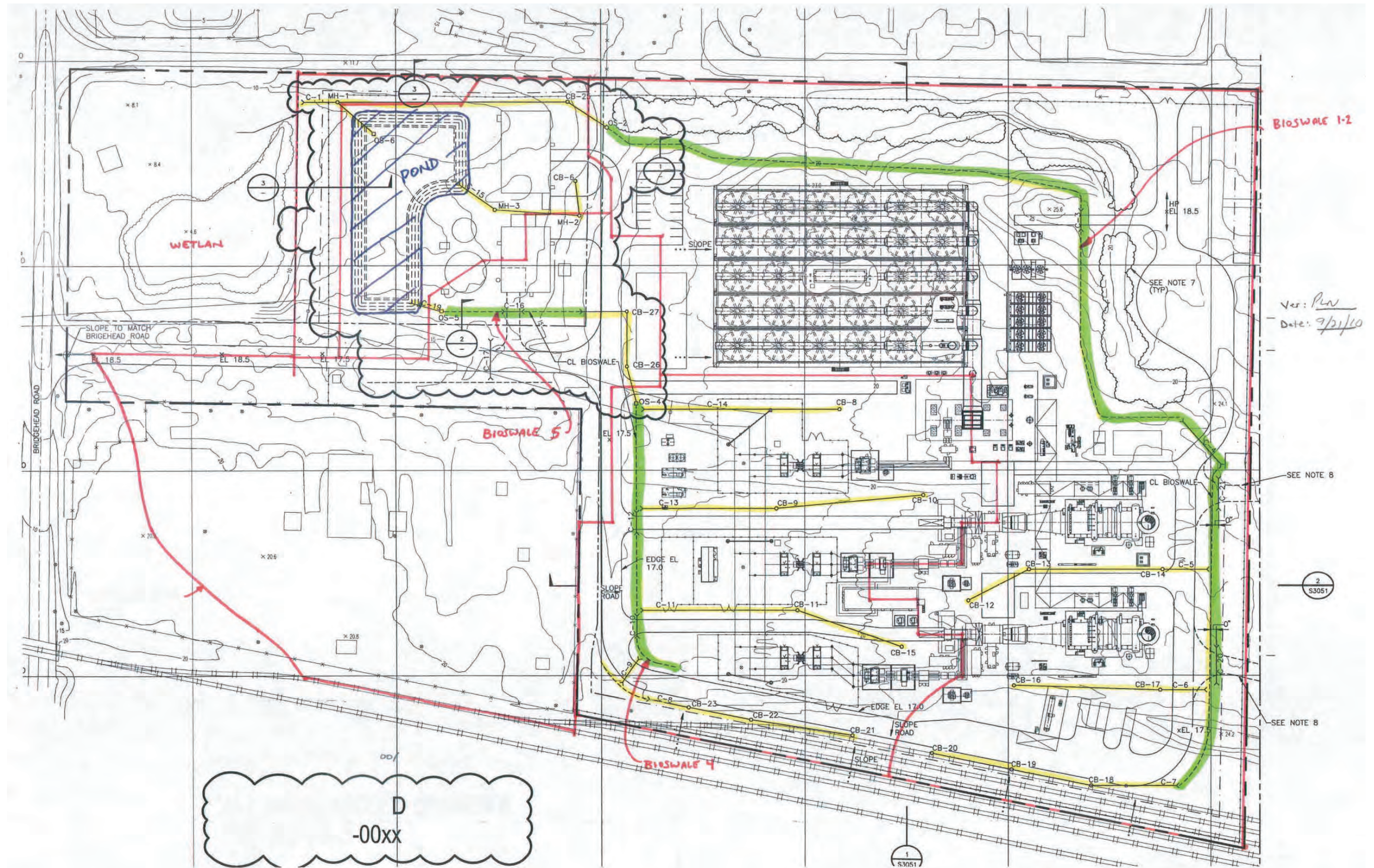
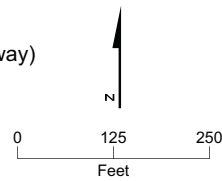


FIGURE 7
Post Development Drainage Plan
 Oakley Generating Station DESCP/SWPPP
 Oakley, California



LEGEND

-  Stockpiles
-  Wetland
-  Access Road (TC-2 Stabilized Construction Roadway)
-  TC-1 Stabilized Construction Entrance/Exit
-  TC-3 Entrance/Outlet Tire Wash
-  SE-5 Fiber Roll
-  SE-1 Silt Fence
-  Soil Berm
-  EC-4 Hydroseed
-  EC-4 Hydroseed, Post-construction
-  EC-7 Geotextiles and Mats
-  "Sensitive Area" Signage



VICINITY MAP



FIGURE 8
Stockpiles BMP Map
 DESCP/SWPPP
 Oakley Generating Station

CH2MHILL

Attachments:

Due to the large size of the PDF file, attachments to this document are stored separately.

See [Oakley Generating Station Power Plant Licensing Case Applicant's Documents](#)